THE CULTIVATOR.

THIRD] TO IMPROVE THE SOIL AND THE MIND. [SERIES.

VOL. X. ALBANY, N. Y., MAY, 1862. No. 5.

PUBLISHED BY LUTHER TUCKER & SON
EDITORS AND PROPRIETORS, 395 BROADWAY, ALBANY, N. Y.

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The Cultivator & Country Gentleman.

[For the Country Gentleman and Cultivator.]

CORN AFTER BUCKWHEAT.

Exhaustive Power of Different Crops.

MESSRS. EDITORS—Experience is quite at swords points with itself as to the exhausting effects of buckwheat. Count Gasparin, a man as skilled in agriculture as he is able in writing about it, says:

"Buckwheat, when cultivated in countries adapted to its growth, has valuable properties. It is not an exacting crop, and accommodates itself to the poorest soils, proportioning, however, its yield to their lack of fertility. In northern countries (of Europe) it usefully fills the interval between the the gathering of early harvests, especially those of barley, and the preparation for the crops of the succeeding year. It is the first crop which is put upon new plowed land. It gives the soil time to settle; it profits from the manure which is laid on for a succeeding wheat crop, and which ripens and becomes suitable for the nourishment of wheat. Its abundant foliage adapts buckwheat to smother weeds, and at the same time to collect abundantly the fertilizing matters of the atmosphere. It has also been remarked that this plant exhausts the soil but little."*

In all the agricultural books we find substantially the same statements. Among farmers generally buckwheat has the repute of not exhausting the soil. What does it mean then that Messrs. HOLDEN and COLBURN find that buckwheat is "a bad crop for the soil." Is there anything peculiar in the soils of North Clarendon and Springfield, in the State of Vermont? Has the plant suddenly changed its habits and requirements—sported, as the florists say, into a new variety? Or are the old authorities wrong after all? Perhaps because Gasparin, Burger, Thaær and Arthur Young were book farmers, albeit honest, practical men in the start, nature and buckwheat have conspired to put them to shame, and turn their counsels into confusion! Perhaps chemistry can help us, and yet A. W. W. of Downingtown, Pa., the bold man who has dared to write the "last word" save perhaps this, after frankly declaring that, "chemically speaking" he knows "nothing about it," quizically inquires, in unmitigated italics, *who does?*

All I know about the chemistry of this crop is that in 100 pounds of the grain of buckwheat there are, in round numbers, and for practical purposes, just about the same quantities of carbon, oxygen, hydrogen, nitrogen, phosphorus, sulphur, potash, &c., &c., throughout the list, as exist in 100 pounds of husked rye, wheat, barley, oats or maize. This assertion is on the evidence of the latest authorities I can find.† As to the straw of buckwheat, I have access to but one analysis, according to which it is destitute of the silica which forms 50 to 70 per cent. of the ash of the straw of the proper grains, and contains twice as much alkalies, (40 per cent.,) twice as much lime, (16 per cent.,) and twice as much phosphoric acid (10 per cent.) In the absence, however, of any data as to the percentage of mineral matters in the straw, and the proportion of straw to grain, it is not possible to exhibit much "science" in discussing the chemistry of the subject. Suffice it for present purposes to say that in our opinion, common sense, taking into account the facts of experience and science together, and winnowing them well in the fan of her incredulous criticism, (whereby be it known to the rapid chemists and slow "practical men," that a vast cloud of chaff and Egyptian darkness, mislabelled "truth" and "fact," go off to the frightened leeward,) may find the real gist of the matter, and render buckwheat as satisfactory a subject for contemplation as flap-jacks are for gustation.

The questions before us are: Does buckwheat exhaust the soil, and if so, how much? In other words, is it a bad crop for the soil? If so, when and to what degree?

The first question I shall answer by asking another. Does it exhaust a man to do a day's work? Obviously the result of a day's work upon a man is not what the mathematicians call a "constant quantity." It depends upon at least two circumstances, either of which may vary to an indefinite extent. To proceed systematically with the argument, it depends, 1st. Upon the nature of the man. A strong man is less likely to suffer exhaustion than a weak man, a well man than a sick man, a skilled man than a raw hand. My big, raw-boned neighbor, Hercules Stark, has done day's works all his life, and never was exhausted; but that delicate young aristocrat from the city, Nehemiah Poughney Doolittle, is out of breath, and has a pain in his liver with spreading one swath of timothy—2d. It depends upon the character of the day's work. Other things being equal, a long day's work exhausts more than a short one, a hard one more than an easy one, a hot one more than a cool one, one that has been paid for more

* Cours d'Agriculture, vol. 3, p. 720.

† Die Getreidearten und das Brod. Von Bibra, 1860.

than one that will be paid for, and one of the head more than one of the hands.

Verily circumstances alter cases. If we ask a company of jolly mowers working in the hay field of a good natured farmer who pays promptly, commends heartily, feeds well, and inquires of the men kindly after their wives and little ones, we shall hear their unanimous verdict, that a day's work doesn't exhaust them; only keeps them in appetite and good health, and makes them sleep well. But stand at the door of a Manchester cotton mill when the operators are turned out at night, and you may read in the faces of the pale, sallow, hollow-eyed column that files past, that a day's work exhausts both the vigor of the body and the spring of the heart.

So with the buckwheat question, we may expect to have it answered both *yes* and *no*.

When on a soil of medium or inferior strength, which gives a fair return with good manurings and judicious rotations, we sow buckwheat under such circumstances as to secure a *heavy crop*, the soil is certainly exhausted, considered with reference to another heavy grain crop. Thus Mr. Holden turned under grass, applied a fair coat of manure, and had a crop which ought to have been pretty heavy. How heavy he does not say, but he does not complain of it being small. After buckwheat had thus consumed the sod manure, corn was planted and failed to make ears. Why? Obviously because it had nothing to make them of! Close by, however, in the same field where buckwheat had not grown, corn did well. Why? Because it was planted on an inverted sod, *as the buckwheat was the year before*. To make the trial satisfactory by putting the corn and buckwheat into the same conditions, Mr. Holden ought to plant corn this year where he had it last. Very likely it wouldn't make ears. Mr. Colburn turned in a light crop of grass in June, sowed to buckwheat, and had *a heavy crop*. Next year he manured the same field well, and planted to corn; it came on slowly, and yielded a fair growth of fodder, with an undue proportion of soft corn. Liking a crop of *forty bushels* of buckwheat, he repeated the process a year or two after, and with the same results. Mr. C. says: "I then made up my mind that buckwheat is not only an exhausting crop, but that it leaves the soil unfit for a good crop after it, until it can recover from the effects of the buckwheat."

Now it would almost appear that Mr. C. has allowed his feelings to warp his judgment. If, as is stated in a slip I cut from an agricultural paper—(an extra copy, I don't generally cut agricultural papers)—a bushel of buckwheat weighs 52 pounds, then 40 bushels of buckwheat is a yield corresponding to 34 bushels of wheat. Would Mr. C. think of getting good corn on a field the next season after harvesting from it 34 bushels of wheat? And if he should try it and get only "a fair growth of fodder, with an undue proportion of soft corn," would he venture to say that "*wheat* is a bad crop for the soil?"

A. W. W. understands this matter. He remarks in general terms "that a grain crop taken from the soil is more exhausting than a grass crop, which practically accounts for the difference in crops after buckwheat and grass." "I have, however, succeeded in raising good crops of corn after buckwheat by a *little extra manuring*," he continues.

The fact is, it is not the name of the crop which exhausts, but the number of pounds that we take off from an acre. Buckwheat is mentioned in agricultural books as giving a very variable crop. Gasparin quotes from Burger a table of the yield of buckwheat cultivated for 16 years in the same locality, (Carinthia, in Austria,) and uniformly sown upon the stubble of winter rye. The yield ranges from the extremes of 2 to 32 bushels, the average being 13 bushels. In Flanders the maximum yield is 56 bushels, the average 17 bushels.

The average crop is not exhausting to average soils, the best crop is not exhausting to the best soils, and the poorest crop is not exhausting to the poorest soils.

Buckwheat is peculiar for its faculty of getting on to some extent in the most barren soils. It won't be killed by any ordinary untoward circumstances. This tenacity of life is precisely what adapts it for culture on light lands. But where well fed, and when the weather, to which it is quite sensitive, is favorable, it is capable now and then of rivalling wheat in the amount of nutritious produce it can furnish, and when it does give a large crop its roots must take hold of the soil, and leave it in a state of temporary exhaustion, from which rest or manure alone can enable it to recover.

The reputation of buckwheat as a crop that is not exacting or exhausting, rests then upon the general fact that it is cultivated under circumstances of soil, manuring and rotation, in which its yield is moderate and its drain upon the soil moderate. Exceptional cases do not invalidate the general truth.

It must be confessed, however, that the agricultural use of the word exhaustion, is for the most part an erroneous one. To exhaust a soil absolutely, is a practical impossibility, no matter what kind, succession or number of crops we put upon it. Of relative exhaustion we may have quite any number of varieties or degrees. But in ordinary agricultural language it is customary only to speak of exhaustion without any qualification, and more often than otherwise no facts are given which enable one to judge of its amount. Owing to this looseness of language, which is due to an indefinite and inexplicit way of thinking upon the subject, we find in the agricultural papers, on the authority of somebody or other, that every crop, and worse still, every manure almost, except stable dung, is exhausting. A. says wheat is exhausting; B. declares maize is exhausting; C. knows rye is exhausting; D. tells us to try tobacco if we would like to see an exhausting crop, and finally "buckwheat is bad for the soil." Guano, bones, superphosphate, &c., &c., are also exhausting. It is all true. On the other hand, all these crops and manures are so far from being exhausting that they are beneficial, so say X., Y. and Z., and they are good authority.

Circumstances alter cases, and our moral is: Consider the circumstances, for in them you will find the reason of the case. Day is a fact, and night is a fact. Opposites may be true. Let us be cautious then about laying down general rules or deducing universal laws from the experience of a ten acre lot. SARRASIN.

BAD ADVICE ABOUT SEEDING.

A correspondent of the *N. E. Farmer* says that a farmer of Canterbury, N. H., told him some facts which had led him to think that he had been seeding his land too much, especially, as it was very strong. In laying down nine acres to grass in the spring, he sowed oats, at the rate of a half bushel to the acre. The result was five hundred bushels of oats from the nine acres. Also his wheat, when sown thin, filled better, and yielded more.

MESSRS. EDITORS—So far from subscribing to the foregoing which appeared in your paper of 27th of February, I have been for some years increasing the quantity of seed oats, and now never sow less than three bushels and generally four. If the land is very rich, moist and abounding in vegetable mould, I sow still more.

Formerly when I sowed two bushels to the acre I was glad to obtain a yield of 30 or 40 bushels, and frequently got less—the straw full of weeds and badly lodged. Now I get without difficulty from 50 to 70 bushels; am never troubled with weeds and seldom have it lodge.

This sowing of half a bushel of seed to the acre may do down in "Canterbury," but no where this side of there I fancy.

Fearing that silence might be construed into an approval by the whole agricultural world of what I consider so great and dangerous a *heresy*, I wish to place upon record my protest.

In England, I believe the usual quantity sown is from four to six bushels—but in this country from three to four is probably sufficient. My observation and experience teach me that the quantity of grain and grass seed sown is generally too little—seldom too much.

Elm Park, near Fort Wayne. Ind. I. D. G. NELSON.

[For the Country Gentleman and Cultivator.]

THE BAROMETER.

MESSRS. EDITORS—I noticed an inquiry in THE CULTIVATOR, about Barometers. In answer would say—I am a plain common farmer—have taken THE CULTIVATOR for years, and keep a barometer, (Timby's, manufactured by J. Merrick & Co., Worcester, Mass.,) and I find said instrument very useful even for *common farming purposes.* It is a plain simple machine with the column of mercury in sight, with slide index attached, and cost $7. I should be very loth to part with the barometer at any price, and go back to the old method of *signs* and *guessing* about the weather, when I can tell by simply looking at the *machine;* yet it requires careful observation and study; and, Mr. Editor, you would do your subscribers a favor I think, by giving them some plain rules for studying the barometer. A SUBSCRIBER. *Cornwall, Vt.*

We will give two rules, which we think will comprise all that is essential, although some would sub-divide them, and add many more, all depending on these.

1. A rise of the column indicates fair weather; sinking, rain in summer, sometimes wind; and wind in winter, sometimes rain. The actual height of the column has less to do with it, than the fact whether it is going up or going down.

2. Set the index in the morning, at noon, and in the evening, and observe the column in connection with the accompanying or coming weather. Constant observation in this way for a few months will give a better knowledge of the instrument than any written instructions, as there is a considerable variation in the indications in different localities.

[Eor the Country Gentleman and Cultivator.]

SHANGHAI SHEEP.

These sheep are, I fancy, but little known to the great mass of sheep raisers in this country, and I think it well to call their attention to them, especially those who supply our markets with mutton. They are gentle, never jump fences, and I should judge from the little experience I have had in such matters, are easy keepers—their principal recommendation is their rapid increase, and the superior quality of their flesh. In China the mutton is considered by foreign residents, English and American, as of the very highest order, and I have heard Englishmen admit that it was quite equal to any raised in Great Britain. In this country I have had but one opportunity of eating it, and found it far superior to the ordinary mutton sold by our butchers. Now for my experience as to their fecundity.

On the 12th of March, 1860, I got from a ship from Shanghai one ewe and three lambs, about six weeks old, which had been born on the passage. The lambs were the offspring of this one ewe—two were males. From this one ewe and her progeny I have raised 18, of which nine were males and nine females. The ewes have almost always twins, often three, and sometimes four. I have now three lambs born on the 16th of Feb., which are as large and hearty as any I have raised, and the dam seems to have no difficulty in supplying her large family with milk, although she (as is true of all of them) has but two teats. I have at present 10 ewes, 1 ewe lamb, 3 buck lambs, 5 wethers and 1 ram,—20 in all, having only disposed of two rams at different times in exchange for pure blooded rams, in order to avoid in-and-in breeding.

The Shanghai sheep has no horns; some have long flap ears, and some short and pointed ears—high noses.

The wool is very poor, being very hairy; still I have been told by manufacturers that it could be used in common carpets. Perhaps if this breed was crossed with the Merino or South-Down, a desirable fleece might be the result. I wish some competent sheep farmer would take the trouble to try such an experiment. As I have but a few acres, and no sheep or wool knowledge, my experiments would be of little value.

I merely add that my small flock is not for sale.

Morristown, N. J. O.

[For the Country Gentleman and Cultivator.]

Fecundity and Hardiness of South-Down Sheep.

MESSRS. EDITORS—It is my aim to keep entirely clear of any controversy on sheep matters, as it would be about impossible for me to write my own opinion and experience of South-Down sheep without appearing in an unfavorable position as a South-Down breeder; and I might be judged of what I despise in others, viz., having an axe to grind. You will allow me simply to remark that I breed sheep for the love of it. But as you request me to respond to Mr. NELSON'S remarks, I have decided to write a few short articles, somewhat at random, on sheep management.

Having owned sheep for twenty-eight years, it might be expected I should know how to manage them, but I claim no such knowledge, and if persons on inspection find my sheep, as regards condition, all that could be desired, it is mostly due to the intrinsic value of the Webb South-Downs, and in spite of bad management.

Before giving my system of management, by way of drawing out Mr. Nelson, in his second article on the peculiar advantage of a particular breed, I will reply to his first by saying that his assertion that "the Leicesters, Cotswolds, &c., are more hardy than South-Downs," is so entirely contrary to the experience and the opinion of those that should know, that I suppose it was a slip of the pen, and that Mr. Nelson did not mean it. And again, that they are "more prolific." I suppose Mr. N. spoke before he thought. Going outside my own flock I may mention that Mr. Thomas Bell brought six of his South-Down ewes to my place to be served by "Frank," in the fall of 1857—the six ewes produced twelve lambs. The same fall Mr. Forman had two served by Frank, which produced four lambs. In the fall of 1860, John Worth of Chester Co., Pa., brought ten ewes to "Reserve"—the ten produced eighteen lambs. Last fall he sent three ewes to "No. 89"—a few days ago I received a note from him stating that the three produced seven lambs, two twinning, and the other had three. In the same note he says, "Young Prize's" ewes are mostly twinning, one produced three." Besides the above I have only heard of three ewes ever sent to my rams that had single lambs; and from South-Down flocks that I am familiar with I think I risk nothing in asserting that of every 300 lambs 200 are twins. This may be also the case with long wools, but I have never met a long wool breeder that claimed as much. In regard to the long wools making more mutton and shearing more wool, an answer would lead us into a long article, so I wait his second communication.

The first great point to be settled in sheep management *is the end to be reached.* It requires different management when the object aimed at is fat lambs for the butcher, from what it does if the object is to breed stock rams. I shall in my next therefore write a few lines on my own experience and observation in raising butcher's lambs.

Holmdel, N. J., March 25, 1862. J. C. TAYLOR.

P. S.—The inquiry about wool matters will be noticed after shearing my flock. J. C. T.

PERCENTAGE OF POPULATION ENGAGED IN ENGLISH AGRICULTURE.—From the annual report of the Poor Law Commissioners to Her Majesty for 1860–61, it appears that of the industrial classes of England and Wales above the age of 20 years, there are—

Engaged in agriculture	16.1	per cent.
In mechanical arts, trade and domestic service	31.0	do.
In manufactures	8.4	do.
In mining and mineral works	6.3	do.

Management of Farmer's Clubs.

The recent description in our columns of the system on which FARMERS' CLUBS in Great Britain generally conduct their meetings, has elicited a letter from the President of a similar institution in Massachusetts, enclosing a copy of its constitution and programme of operations for the current year. We publish them both below, as a model of systematic arrangement and energetic effort for all other organizations of the kind.

G. W. CHASE, Esq., to whom we are indebted for this information, mentions in his letter, that a copy of the programme is furnished in advance to each member of the Club, and the committee appoint beforehand some one to open each discussion. But the "*Field Days*," as they are termed, are regarded as a peculiarly profitable and instructive, as well as possibly an original, feature with this Club:

"The plan is this: May 5th we meet in the evening at the house of A. B. for our regular monthly meeting. On the *afternoon* of that day, as many of the members of the Club as can do so, meet at the same place, and spend three hours or so in looking over the farm. The object is mutual consultation and observation, with a view to mutual improvement. A. B. may have his doubts about what to do with a particular piece of land, or about the propriety of certain changes in his buildings, and he improves the occasion by getting the combined opinions of his brother farmers upon the subject. This is at once a convenience for him, and may, perhaps, save him much perplexing thought, and even time and money; and is also a means of pleasure and profit for his visitors. Those of his visitors who live at a distance,—and such others as choose,—are invited and expected to take supper with A. B., and be on the ground for the evening meeting. Those who cannot attend in the afternoon, come just after supper, or not until evening, as they may find it convenient. In the fall, it is sometimes desirable to visit several different farms or gardens in a single afternoon, to examine fruits, &c., under the various conditions of soil, location, and culture, listening the while to pithy observations upon the qualities, habits, adaptation of soils, best fertilizers, and the many points of interest connected with the subject. The practical value of such "Field Days" can hardly be over-estimated."

Of the "Market Day and Fair," Mr. C. remarks that it includes "an exhibition of stock, fruits, vegetables, and flowers, with small premiums for the best of each. The premiums are paid by receipts for admission fees to the exhibition,—the deficit, if any, being made up by previous guarantee subscriptions."

Constitution of the Haverhill Farmer's Club.

ARTICLE 1. This Association shall be known and styled as the "Haverhill Farmer's Club."

ARTICLE 2. Its object shall be to increase the interest and knowledge in Agriculture and Horticulture.

ARTICLE 3. Its officers shall be a President, three Vice-Presidents, Secretary and Treasurer, and a Reporter, who shall be chosen annually, on the first Monday in March, by ballot, and shall constitute a Board of Directors," with full powers in all matters relating to the Club not otherwise provided for.

ARTICLE 4. The Club shall hold regular monthly meetings, on the first Monday evening of each month, and also weekly meetings, during the fall and winter months, at which the exercises shall be such as may from time to time be agreed upon.

ARTICLE 5. Any person may become a member on recommendation of the "Board of Directors," paying the sum of one dollar, and signing this Constitution.

ARTICLE 6. This Constitution may be amended at any regular monthly meeting by consent of two-thirds of the members present.

Officers for 1862–63.

President—GEO. WINGATE CHASE.
Vice-Presidents—George Coffin, James T. Gile, Kendall Shattuck.
Secretary and Treasurer—Charles Corliss.
Reporter—David Boynton.

Subjects for Discussion.

1862.

March 14. Fruits.
do. 17. Drainage.
do. 24. Farm Implements.
do. 31. Management of Farm Stock.
April 7. Manures—comparative value, preparation and application.
do. 14. Comparative value of Horses and Oxen for farm work.
do. 21. Sheep—breeds, management, &c.
May 5. FIELD DAY. Preparation of the Soil.
June 2. FIELD DAY. Pruning.
July 7. FIELD DAY. Grasses.
August 4. FIELD DAY. Rotation of Crops.
Sept. 1. FIELD DAY. Gathering and Preserving Fruit.
do. 18. MARKET DAY AND FAIR.
October 6. FIELD DAY. Small Fruits, kinds and culture.
do. 15. Transplanting Trees and Vines.
do. 20. Apples—kinds and culture.
do. 27. Is Farming Profitable?
Nov. 3. FIELD DAY. Pears, kinds and culture.
do. 10. Farm Stock—comparative value of breeds.
do. 17. Seeds—how to raise, preserve and select.
do. 24. Milch Cows.
Dec. 1. Grapes—kinds and culture.
do. 8. Influences of the Atmosphere on Soil and Crops.
do. 15. Experiments that we have made.
do. 22. Poultry—breeds and management.
do. 29. Farm buildings—their arrangement and construction.

1863.

Jan. 5. Adaptation of Soil to Crops.
do. 12. Rural Embellishments.
do. 19. Garden Vegetables—kinds and culture.
do. 26. Diseases of Trees and Vegetables.
Feb. 2. Farm Economy.
do. 9. Flowers and Ornamental Trees.
do. 16. Noxious Insects.
do. 23. Are Birds more serviceable than injurious to farmers
March 2. ANNUAL MEETING.

We are not surprised that Mr. CHASE should add, in conclusion, that the Meetings of this Club are well attended and that its Members are "unanimous in favor of their practical value and general interest."

[For the Country Gentleman and Cultivator.]

OIL THE "OLD HARNESS."

MESSRS. EDITORS—many farmers seem to think that the "old harness"—the one they use for ordinary farm work—needs no care. If a strap breaks, it is *toggled* up with a leather or tow string, but cleaning and oiling is out of the question. This ought not so to be. If the "old harness" is cleaned and oiled twice a year, it will last as an "old harness" a long time—twice as long as it would if neglected. Now is the time to do this job, before spring work comes on. It should be washed clean in warm water—not soaked *too much*—and allowed to become partially dry, and then thoroughly oiled with neats-foot oil. The oil should be warm when applied. A good way is to set the dish of oil into another dish containing hot water. In this way the oil can be kept warm during the process of oiling. A little ivory-black mixed with the oil is an improvement. If the harness needs mending, let it be done after washing, and before oiling. Every one ought to have an awl, wax, thread and *gumption* enough to mend the "old harness." "A penny saved is two pence earned." J. L. R. *Jefferson Co., N. Y.*

[For the Country Gentleman and Cultivator.]

THE EASY WASHER.

MESSRS. EDITORS:—I noticed in THE CULTIVATOR, an inquiry about the Union Washing Machine—also one person that recommended it as being good. Now I will contribute my mite about washing machines. I have tried a number of washing machines, and have never found one that answered as good a purpose as the "Easy Washer." It does the work well, and does not wear the clothes *one-half* as much as a wash-board will. It is truly what it is called, the "Easy Washer." It is easily worked—so easy that a child can work it, and it will wash the dirt all out that can be rubbed out on the wash-board. It is light to handle, does not take up an unnecessary amount of room, and its cost is trifling ($5), compared with most machines. There has been some twenty or twenty-five of the Easy Washers sold in our town, and they all like them. The universal exclamation is, "I would not sell it at any price if I could not get another—I can get my washing done so much quicker and so much easier too." I think they are durable, and that is one good thing for me, for I cannot afford to buy a new machine every moon. I have had mine more than a year, and it has been used every week to wash for a family of six persons, to do all sorts of washing, from fine clothes upwards to bed clothes—in short all sorts of washing that a farmer's family has, and it is just as good for what I can see, as it was when I bought it—in fact, I would not carry it a mile to exchange it for a new one. J. C. *Brookfield, Conn., Feb.* 13, 1862.

AGRICULTURE OF IOWA.

From the Report of Mr. DUANE WILSON, Secretary of the Iowa State Agricultural College, we derive some facts as to the Agriculture of that State, which may be of interest to the readers of the COUNTRY GENTLEMAN.

The area of Improved Land in the State of Iowa, which was a little over two millions of acres in 1856, is now computed in round numbers at four millions. The following estimate is given of the aggregate production of the leading crops for several years past:

	1856.	1858.	1859.	1860.	1861.
Wheat, bu.,..	5,469,516	3,298,253	7,799,068	19,491,712	18,350,000
Corn, do. ..	31,163,352	23,366,654	44,374,320	56,161,215	60,000,000
Oats, do. ..	6,127,329	1,703,760	2,000,000	2,500,000	10,000,000
Potatoes, do..	2,014,388	1,497,204	1,800,000	2,200,000	2,000,000
Sorghum, gals.		416,774	1,079,725	2,000,000	3,000,000

The farmers of Iowa have probably twice as much unimproved land on their farms, as there was actually employed for cropping, or about eight millions of acres. Mr. WILSON remarks that the cost of this can hardly have been less than $2.50 per acre, or twenty millions of dollars. This capital now lies idle, and as money is there worth 10 per cent., there is a consequent annual loss of two millions of dollars from this source to the farmers of the State, together with the taxes they pay on these lands of $225,000 more. Mr. W. then puts the pertinent question—

"Would not the owner of unimproved lands do better to rent the lands for the taxes, than permit it to lie idle, or sell it now for half the cost, and invest the proceeds in needed improvements on the cultivated lands, where he would realize from 50 to 100 per cent. annually? There can be but one reply to these queries when applied to the whole State. There are doubtless some who will cavil at these conclusions, and contend that as the improvements on lands enhance the value of the wild lands contiguous thereto, the persons making these improvements should have, as far as possible, the advantage of that advancement. Of what benefit can it be to such when they are unable to sell or cultivate them, and may not do so for years? Better to cultivate thoroughly what they are able to manage by their labor and means, and thus increase their products, than to rely upon supposed advantages in the far off future."

This is an argument worthy of thought. Of course it cannot be expected that the ninety or one hundred thousand farmers of Iowa should now be either willing or able, as a whole, or as a general thing, to act in accordance with it; but to those who do have opportunities to rent or sell their surplus land, this course seems much more in accordance with true economy, than to endeavor to carry such a burden of unproductive capital. And to emigrants going to the West, Mr. WILSON'S observations are a useful warning; while interest *may* eventually be made and farther profit beside, in the increasing value of the land, few have capital enough to wait during the intervening period for what is at best a matter of some uncertainty. In the attempt to do so, how frequently loans may have to be made at most usurious rates of interest, which will rapidly swallow up the value of the land, both present and prospective. It must be much the wiser and safer system to begin with no more land than can at once be compelled to pay its own way, if not to return a profit; it can never be difficult to add to the size of the farm, as one's means of investment and of cultivation become really adequate to the undertaking.

☞ The Illinois Central Railroad Company expect to distribute about 750 bushels of Cotton Seed obtained by Government agents in Tennessee, for trial among farmers on their line of road in Southern and Central Illinois.

A Day at Thorndale and Waldberg.

Last week we had the pleasure of spending a day at Thorndale, and another at Waldberg. The snows were fast disappearing and the frost leaving the ground, but the Spring must be quite backward all along the Hudson. The Short-Horns at Thorndale have wintered finely, and are in thriving order. The root-cellar is not yet exhausted, and evidently contributes much to their health and welfare. Mr. THORNE has a new Catalogue in press, which will show the present constitution of the Herd to better advantage than any notice of ours, and we mention the fact for the benefit of those especially interested. In the course of conversation, we were glad to ascertain that the past year, although justly characterized as "dull" for sales of improved stock, has not been without good reason for encouragement in the continuance of that close attention and well directed effort, of which the Thorndale animals afford so abundant proof; and, in point of fact, the herd shows no surplus over its usual numbers, and the demand appears just about to keep pace with what it can spare.

At Waldberg, the residence of Hon. A. B. CONGER, there has been a vast expenditure of labor since our last visit, in clearing up, fencing and draining the fields, in adding to the farm buildings, and in replacing the sad loss occasioned by the fire of 1860. Our readers already know how extensively Mr. CONGER is concerned as a breeder, having a Devon and an Ayrshire farm as well as a Short Horn establishment; and we may add that he also is preparing a Catalogue, which will be of unusual interest, not only from the number of animals it will include, but from the attention which Mr. C. has devoted to systematizing and completing the pedigrees of the Short Horns, upon a plan devised by him expressly to facilitate the tracing back of the different strains of blood combined in each, through the most celebrated of its ancestors on both sides. Thus the work will rank rather as a contribution to the history of the breed than merely as the register of a single herd.

Just where the Palisades on the western bank of the Hudson begin to soften from precipice into hilly pasture, Mr. CONGER has a shore line of more than two miles' length—his land stretching back over the bold range of highland with which Rockland here looks down upon the vineyards of Croton Point and the broad waters of Tappan Sea—the main extent of the farm thus lying beyond, and mingling its outflow with the head waters of the Hackensack instead of the Hudson. Upon an estate of such size—more than sixteen hundred acres—of land that has been under the improvident farming of several generations, it is no small task to replace confusion with system, and partial exhaustion with fertility and productiveness. To this task, however, Mr. CONGER has devoted himself with untiring energy, and with a degree of liberality as well as zeal, which have few parallels in our agricultural history. It is his earnest desire and hope to prove eventually that the capital thus invested in the soil will not be without returns; and, whether this end may or may not be attained, he will at least have made his mark upon the progress of the County, and placed before the farmers of the State an example of *faith* in improvement, testing in practice the means of its accomplishment, and throwing the light of his experience upon their results.

Speaking of Roots, which Mr. CONGER, as well as Mr. THORNE, grows upon a large scale, we saw the next day, at the warehouse of HAINES & PELL in New-York, a new and very promising little implement to facilitate their culture. With several knives on each side of the row, pushed forward by a long handle, it must quite thoroughly dispose of the weeds, and leave the ground loosened up and much benefitted by the operation.

Wintering Cattle---Stables, Water, &c.

It it an old maxim, that stock well summered, are half wintered. Stock that come into winter quarters in a lean condition, require extra care and feed to be brought to grass the coming spring in a fair condition. Although we have passed mid-winter, still the most critical time to care for stock is to come.

I cannot better give my ideas on the subject of this than to give my practice—the result of many years of care and observation.

I aim to cut my grass when the saccharine matter is most fully developed, before the seed is ripe, the leaf decays, or the stalk takes on the woody nature. Grass partly made, I put up over night, and open next day, to prevent its bleaching by dew or rain, believing the extra labor is more than compensated by the better quality of the hay. I sort my hay (that is by loads,) in filling my barns, putting that of an inferior quality or damaged, where it can be fed in early winter when the bracing air gives stock a sharp appetite, reserving the better qualities for the latter part of winter and spring, when, from long feeding on dry food, their appetites are more delicate. In this way there is no difficulty in using up your several qualities of hay without any unusual loss of flesh.

Another important consideration—after your hay is well secured, so that you can get at the different qualities when you choose—is warm and convenient stabling.

I have cared for stock in most of the different kinds of stabling that have been in use during the last fifty years, and as the result of my experience, have adopted the following plan, all things considered, as the best:

I have constructed a stable for cows seventy-six feet long and fifteen wide, holding twenty-five head, running the whole length of one side of my cow-barn. The outside is covered with two layers of three-fourth inch boards, breaking joints, and has five six-light windows.

The sleepers on which the floor is laid, rest on stone butments, sunk in the earth so as to rest firmly, and are entirely disconnected with the sills, so as to prevent any decay from the urine of the animals, the thickness of floor only coming above the under side of the sills. I lay a tier of short plank crosswise of the stable, four feet long, resting against the outer sill. I then lay the tier of long plank on which the cattle stand and feed, the lower end resting on the short plank, making an offset of two inches for the droppings of the stock, and four feet and three inches wide, the sill included. I give the floor a descent of one inch in three feet, which is sufficient to carry off the water and not retard their efforts to rise.

I put the bed-piece for stanchions four feet and ten inches above the drop for manure, leaving five feet six inches in front of stanchions for feeding. I lay the floor from seasoned plank with care, and battening on the under side the joints in the feeding alley, so that no feed will fall through. I have seen stable floors so open that creatures might as well lay on a coal-grate as the floor for warmth. I fasten with stanchions locking on both sides the neck. This may not be as easy to the animal as ropes or chains; but leaves them more cleanly, which is an important item with a dairy. With chains the cow will go forward to eat, and while so doing drop her manure; then back up and lay down in it, keeping themselves constantly filthy.

I do not feed at once enough for a meal; but as fast as they eat the first given them, repeat the feed till they are satisfied. In this way there is not much refuse. I turn them out at 9 A. M., and tie them at 3 P. M., in ordinary weather. This gives them time to water and necessary exercise. I do not feed anything broadcast in the yard except some refuse hay, straw, &c. As spring opens and days increase in length, I turn them out earlier, put them up and feed at noon, and then turn out till night.

In feeding stock broadcast in the yard or field, you lose all the finer particles of the hay, which is the most delicious part of it; and if you chance to feed in excess, it is trodden under foot and lost. Free access to water is indispensably necessary; and if you can have running water in a trough near by, it is all the better.

We often see stock obliged to go to some ravine to drink, with the bank of trodden snow so elevated on the bank above the water, that we are reminded of the story of the man who was found holding his cattle by their tails like a dipping candle, that they might allay their thirst. Light and ventilation are important attachments to stables. The former is always needed without any regulation; the amount of the latter needed depends upon the temperature of the weather, or the stagnant or free circulation of the air.

In penning the above remarks, I have not the vanity to think that I have arrived at perfection on the matters discussed,—but have done it believing that good may result from a comparison of notes among farmers, by their giving their mode of conducting the same branch of agriculture, and hoping always to receive more useful instruction than I impart. HIRAM WALKER. *Mexico, N. Y.*

Remarks on "Raising Apple Trees."

EDS. CO. GENT.—I would like to say a few things for the benefit of "P." of Salisbury, Conn., "or any other man," about embarking in the nursery business. You recommend Barry's Fruit Garden, and Thomas' Fruit Culturist; these are both excellent works, but the world moves, modes change, and the nursery business progresses.

In raising apple trees I think I can say something new. Grafts should be set out in ground well enriched, and worked *very deep*. Set them two to two and a half inches apart in the rows, two rows within four inches of each other, and then leave a space of three feet and a half; this is what I call *double rows*. Mark off the rows at four feet apart, by stretching a rope and pressing it into the soil so as to leave a mark. To plant the grafts, have a good spade, the blade of which is twelve inches long by seven wide; one man uses the spade in the following manner: thrust it nine or ten inches into the soil, so as to have the spade extend equally on both sides of the mark for the row, now push the spade from you, and then withdraw: this operation will leave a wedge-shaped hole ten inches deep, seven wide, and about two broad. It is necessary to have another man to put in the grafts; he should put in two, each two inches outside of the mark left as a guide, holding them till the first or spade-man repeats the operation with the spade, which will be about two and a half inches from the edge of the first hole. In making the second, the soil is pressed against the grafts in the first, and thus the operation not only makes the new hole, but closes the last, and while the spade is being withdrawn, the second man gets the grafts for the new hole. There is no time lost from one operator waiting on the other; men do not tire at this work as they do at dibbling; it does not make the hands sore—the operators can change places, and will do more work than with the dibble. Set the grafts with only an half inch above ground.

First Year—The grafts should be well tended, all weeds kept down, and the ground loosened. After they have grown an inch or two, *sprout* them; this consists in taking all the sprouts off but one, the best. In the fall they should all be taken up and stored in the root-cellar, and during the winter trim the roots and top, the top cut to within an inch of where it started; the roots should be trimmed small enough to enable you to plant them in the nursery row with the spade.

Second Year—Plant these yearlings in the nursery the same as the year before. Rows four feet, plants one foot apart in the row, leaving an inch above ground. Sprout as before. In the fall and during the winter, trim them to *whips*—that is, leave only one strait shoot.

Third Year—Let them grow as they may. In fall and winter, trim to *whips* and top at four feet.

Fourth Year—During summer trim off any limbs too low on the trunk to belong to the head. In the fall you

will have trees that you need not be ashamed to have people see before they purchase.

Allegheny City, March 22, 1862. J. HERON FOSTER, Jr.

[For the Country Gentleman and Cultivator.]

Sheep and Wool Growing in New-Hampshire.

Messrs. Editors—A correspondent, "W." in the Co. Gent. of 13th Feb., furnishes us an interesting article on "Sheep and Wool-growing in Madison county, Ohio." Near the close of his communication, he expresses the wish "that others in the wool-growing trade, East and West would give us their experience, profits, &c."

Having recently visited some of the wool-growers in this (Merrimac) county, and taken "a few notes by the way," I here give the results.

Wool-growing in this section of the Granite State has become a prominent branch of farming. Many of our farmers have been long engaged in sheep-rearing. Those who have persevered in the business, have been very successful in a pecuniary point of view, realizing much greater profits from sheep husbandry, than they could have done from any other branch of farming. Notwithstanding the occasional fluctuations in the market value of sheep and wool, the number of sheep has been greatly upon the increase here for some years past, and there has probably been a corresponding decrease of cattle.

Experience has fully demonstrated the fact, that sheep will do much better on our old, long grassed pastures, and better keep down bushes, briers, &c., than cattle. Besides, they will winter better on a poorer quality of hay, if they are regularly fed with a moderate allowance of grain or roots.

Almost the *entire* of sheep kept here, are of the Spanish Merino breed and their grades. Many of the flocks possess all the requisites that constitute No. 1, fine wooled sheep.

Among the more prominent of our flock masters, are several by the name of Couch; they all reside in the same neighborhood. Some of their farms are in this town, some in Salisbury and others in Boscawen, yet they all reside within a sweep of less than a third of a mile. The number of sheep kept in this small circle numbers 1150—with the usual proportion of cattle, horses, swine, &c.

John Couch jr., and son (Warren) have 400—having the past year purchased a considerable number of wethers and selling about the same number of ewes. They sheared last June 300—the fleeces averaged 5½ lbs.—which they have just sold at 49 cents per pound. By purchasing in Vermont prime bucks of the Atwood stock, and careful selection of breeding ewes, they have double the weight of fleeces, and greatly improve the quality of the wool, and the size and value of the animals. From the 300 sheep sheared last June, they have received for wool and sheep sold $1,040—selling sixty of the poorest of their ewes at $3.75 per head—raised 106 lambs, a large portion of which are of the pure Atwood breed.

Several years since they commenced the improvement of their flocks by purchasing pure bred bucks in Vermont, having in the time purchased five, for three of which they paid $100 each, one at $50, one at $25. They now have a superb buck, ten months old, which they purchased of —— Sanford, Orwell, Vt., a few months since, for which they paid $100.* The Messrs. C.'s are fully satisfied that it is more profitable to make use of these high bred and high priced bucks, than to make use of ordinary or $5 bucks.

They estimate the cost of wintering a sheep, per head, from $1.10 to $1.35. Pasturing, shearing, &c., &c., at 58 cents per head.

They prefer to have the dropping of the lambs commence about the 20th of March. This winter they are feeding corn and oats, the two preceding winters they have fed corn and beans—the latter obtained in Boston and costing one dollar per bushel at our railroad depot. For breeding ewes they prefer beans to any other provender they have ever fed. But in consequence of the high price of beans last autumn, they purchased none.

Samuel Couch and sons (Henry and Charles,) keep about the same number as John and Warren; their sheep and management about the same. This winter they fed corn and oats one day, and turnips the next. Their fleeces average two ounces higher than John's—from 290 sheared last June, they have received $1,160, and they estimate their flock to be worth $200 more than it was a year ago, and the same in regard to John and Warren's flock. They estimate the value of their ewes at ten dollars per head, or in other words would not sell an average lot at a less price. They are satisfied that sheep improve their pastures, and that they can improve their farms by keeping sheep, quite as well as by keeping cattle. They also consider the manure of sheep from a given quantity of hay consumed, worth more than that from cattle—that is, as cattle manure is usually managed by farmers. They use no litter in their sheep hovels till the sheep commence dropping their lambs, then they are kept well littered with straw, &c.

The manure in the spring in the hovels, is worked over and pulverised, applied to the land and immediately plowed or harrowed in; by this process heating and fermentation, if any, takes place in the soil.

Woodbury and Albert Couch, and others in the same neighborhood, have similar flocks with those described; management very similar, attended with similar results, in a pecuniary point of view, which by the way, are very favorable, as their neatly, well finished and furnished houses, large barns, and convenient out-buildings and generous hospitality fully prove.

In another section of Salisbury, I visited the farm of George Quimby. His flock contains 200 very fair fine-wooled sheep, which he manages with skill, not having lost more than one sheep in a hundred, annually, for the past four years. Every sheep of his flock is numbered, (and so are the Messrs. Couchs') and each fleece is weighed as soon as it comes from the sheep, the weight of the fleece entered upon a book opposite the number of the sheep. By pursuing this course for a number of years past, and selecting the heaviest fleeced ewes for breeding, he has been able to greatly increase the size of his sheep and weight of fleeces, obtaining more wool from 200 sheep now, than his father did from 350, a few years ago.

In 1840 the fleeces averaged 2 lb. 6 oz. In 1849 averaged 3 lb.; in 1856 4 lb.; 1861 averaged 4 lb. 11 oz. This increase of wool has been effected by careful selection of breeding ewes, and making use of good bucks, though he has not used any of the $100 ones. He raises from 60 to 100 lambs annually, selling an equal number of ewes and wethers.

There are some facts connected with Mr. Q.'s management worthy of note. His hay being mostly upland of good quality, he neither feeds grain or roots to his sheep. His pastures are good, and the lambs are not dropped till into May, or after the sheep are turned to pasture.

From 1845 to 1858, he purchased from ten to twelve hundred dollars worth of hay, costing from 8 to 10 dollars per ton. Most people suppose, if the purchased hay had been fed to cattle, he would have lost money by the speculation. But the very reverse has happened in his case. Within ten years he has doubled the hay crop on his farm, and largely increased the amount of his grain crops. His house, barns, out-buildings, &c., are large and well finished. His well managed flocks have been the basis of his success in farming, although he has kept a fair stock of cattle during the time. I am happy to say there are thousands of other farmers among the hills of New Hampshire equally successful and prosperous in the wool-growing business, as those I have noticed here.

Warner, N. H. LEVI BARTLETT.

* The buck was weighed in my presence, weighing 114 lbs.

Wheat and Guano.—The Genesee Farmer says, if we could get $2 per bushel for our wheat, guano might be used for this crop with profit. At $1 it barely pays, except in rare instances.

[For the Country Gentleman and Cultivator.]

RAW AND "SEASONED" MUCK.

"To realize the full benefits that may be derived from the use of muck, it is important that it should be dug from the swamp and piled on dry ground some months before using it in compost, and if it could thus lie for one or two years, so much the better. While in the green and wet state, the vegetable matter of which it is composed is more or less locked up in acids deleterious to cultivated plants, and is therefore unavailable to them as food, and its qualities as an absorbent are but in part developed. But give it age, and the water and acids will in a large degree pass out of it, so that it is lighter and every way more convenient for handling, and better for becoming the food of plants; and being thus dry and finely pulverized, it is, next to pulverized charcoal, the best absorbent of the liquids and volatile matters of manure that we can employ."—Hon. F. Holbrook.

Artemas Newell, Esq., of Needham, who has used muck largely in various forms, in a letter published in the Transactions of the Norfolk (Mass.) Agricultural Society for 1861, remarks, "The muck should be dug from its bed late in autumn, and be fully exposed to the frosts of winter before it is used. The reason why I prefer to have it dug at this season is, that if dug earlier and left on dry land, it sometimes becomes hard, like dry peat, and is, in fact, better for fuel than for manure. I deem it a waste of labor and money to use it in combination with potash or alkalies in any other form until it has been thus exposed and prepared."

We quote the above paragraphs as introductory to some remarks, partly suggested by the inquiries of Mr. W. J. Petter, in the Co. Gent. of March 13, p. 169.

For several years past we have given considerable attention, both theoretically and practically, to the use of muck in various forms. One of our experiments had some resemblance to that of Mr. P.; its results may be worthy of statement. Having three years ago, a quantity of manure under our cattle sheds, still in a nearly fresh state, we made in July some seventy-five or more loads of muck and manure compost. The muck was drawn fresh from the bed in a partly dry state, and placed in layers with the manure, each six to eight inches deep, in the proportion of two loads of muck to one of manure. The heaps were piled about four feet high, and eight feet wide, and twelve to fifteen feet long at the bottom, but of course of less size at the top, and the material, except the first layer, thrown on from the wagon with forks and shovels, so that it might not become too compact for decomposition.

The first heap, made up mostly from surface muck pretty well pulverized, fermented considerably, and was used upon fall wheat in September. There were, however, occasional cakes of muck which were unchanged, only the fine black portion seemed to be acted upon by the contact with the manure, and so far both were homogeneous or materially alike in action and character.

Other heaps made in larger proportion from the lower strata of muck, were left over until the next season, and then used as a surface fertilizer (mixed with the plowed soil by harrowing,) for corn and oats—the latter seeded to clover. A considerable portion of this muck remained unchanged in character even though quite finely broken, and was of very little value as an addition to the manure. On the oat ground the clover was much better where the dressing was applied, but this was no doubt owing mostly to the manure; and the next season a large growth of sorrel overtopped the clover for a while, the result of the acid still present in the muck, which in its original bed produced little else than this weed over a large share of its surface, and the deepest deposit of vegetable matter looked like the moss seen in some swampy springs, and was still sour to the taste and smell to a remarkable degree, especially when first opened.

The next season we formed of the same kinds of muck and manure a larger heap, intermingling the material by driving over the pile with the wagon and spreading it therefrom. This saved considerable labor, but made the pile so hard at the bottom that no fermentation took place. After using the surface, the balance lay over until the next spring, when it was thoroughly mixed with the plow and harrow. This was afterward used as a hill dressing for potatoes with very good effect, also for mixing with hen manure as a fertilizer for corn in the hill.

One year (1856, I think,) one of our muck ponds became very nearly dry, so that by plowing and scraping we drew out a famous pile of muck. This deposit has very little acid in its composition compared to that named above, and was used with better results—decomposing far more easily and acting more readily in the compost heap. It was however less valuable than it would have been had it not been trampled so hard while dry by the team passing over it in scraping out, and by the stock afterward, so that the "seasoning" was less effective than it would have been had it lain in a lighter state. Muck should either be piled lightly in heaps, where cattle may not trample it, or be spread over a considerable surface, so that it may be frequently and thoroughly stirred by the plow. The latter treatment is to be preferred. Then, when well dried and aerated, it is in fine condition for storing where it can be got at through the winter, for mixing with manure, for use as bedding, and as an absorbent in the stalls of cattle and horses, which would thoroughly compost the two materials, making a large supply of manure of first-rate quality. Of this particular mode of treatment, however, we cannot speak from experiment, but we have abundant evidence of the truth of the statement, and we hope to give it practical test ere long.

We might recount other facts in regard to the best state and manner of employing muck as a fertilizer, but our remarks have already over-run more space than we intended. It is a subject of great interest to every farmer who has these muck beds within his reach, as he may thereby largely increase the products and profit of his farm. *

Hints about the Planting of Potatoes.

The following excellent extract, conveying some useful hints with reference to the distance apart at which Potatoes should be planted, the depth at which they should be put in, the employment of whole or cut tubers for seed, and the time of planting—forms part of a recent article in the *Scottish Farmer:*

Our excellent friend, Mr. Robert Thomson, of the Royal Horticultural Society's Gardens at Chiswick, who has carried out more experiments on the potato crop than any other man living, in reference to the distance at which this crop should be set, thus writes:—"In the case of very strong kinds, it cannot be denied that quite as much produce may be obtained at 12 or 15 inches apart as at 8 inches, (*i. e.*, in the line;) but, when the plants have much space, they are apt to produce tubers varying greatly in size, some of the first formation being much too large, while those of a later production are too small. In neither case are the tubers so good as when there is a more equal and middle-sized crop; and it should therefore be the aim to obtain a crop of this description. If a sort is naturally inclined to grow too large, it is well to plant it rather closely in the row; and it is better to do this than to limit the distance between the rows. It is much better to have the rows 27 inches apart, and the sets 8 inches asunder, than to have the rows 24 inches apart and the sets 9 inches from each other; and this again is prefer able to rows 18 inches asunder, and sets 12 inches from each other. In either of these ways the same number of sets will be required to plant a rood of ground; but there is, in the greater distance between the rows, and the less distance between the sets, a double advantage—first, as regards the labor in planting; and secondly, in a greater space for earthing up being afforded. When planted at the distance of 27 inches from row to row, the number of

trenches required to be cut out is one-third less than when the rows are 18 inches apart; and when planting by the dibbler is adopted, one-third more ground has to be traversed."

Nor is the depth at which the sets are to be placed a matter of indifference; from a series of experiments carried on in the Experimental Gardens at Chiswick, the following results as to depth and produce per acre were arrived at:—

At three inches in depth, the produce was			....	13 tons and 14 lbs.
At four	do.	do.	do.	.... 14 tons, 1 cwt., 18 lbs.
At six	do.	do.	do.	.... 14 tons, 11 cwt., 4 lbs.
At nine	do.	do.	do.	.... 13 tons, 0 cwt. 111 lbs.

The greatest produce, therefore, was at six inches in depth; at three inches the least return; while many of the sets at nine inches did not vegetate, or at least failed in reaching the surface.

Some uncertainty exists as to the propriety of planting cut tubers or whole ones, also whether the latter should be large or small. The Chiswick experiments show that the mean produce of two plantations, one made in March the other in April, of cut seeds, exceeded that from whole tubers by nearly one ton per acre. A crop planted in April with whole tubers was greater than that from cut sets, but the crop planted in March with cut sets gave nearly two tons per acre more than the whole tubers planted in April.

Large tubers, planted whole, are preferable to small tubers, because the former have larger and stronger buds than the latter, and, therefore, as reason dictates, the stronger buds produce the stronger stems, and greater number of leaves, and upon them the crop most indisputably depends. The eyes of potatoes are true buds, and in small tubers they are comparatively weak, and consequently produce weak shoots, and the crop produced from such is inferior to that obtained from plants originating from larger tubers, furnished with larger eyes; and this conclusion has been justified by the results of many years' actual experiments.

So also is the case, as already stated, with the secondary or tertiary shoots, which are produced from tubers kept till late in the season before planting, the strongest buds having sprung in the pits, and been rubbed off in the process of turning them over; so, again, the secondary, or next weaker buds, experience a similar fate; while the crop is left to depend on the tertiary buds, which are the weakest of all. Can anything, therefore, be more conducive to weaken the vital principle in the potato, and predispose it to the attacks of disease? This is the certain consequence of late planting, and together with the rapidity with which one potato crop succeeds another, even in what is called high cultivation, is, no doubt, an important element in rendering this plant so susceptible to disease as it at present is.

It has also been found by experiments carefully conducted, that sets taken from the points of the tubers and planted in March, have yielded a crop at the rate of upwards of three tons per acre greater than when the sets were taken from the base of the tubers. In the case of the kidney varieties, when cut, the incision should be made longitudinally, and not transversely, as in the latter case the set from the top would only have eyes or buds, while that from the base will have none.

This is the cause why crops of kidney varieties come up so unequally, one description of sets having buds or eyes, while the other has none, according to the way the tubers have been cut.

Of course, these hints are chiefly intended for garden cultivation, and for amateurs in particular, because, in gardens we as often see the same errors fallen into as in field culture, and our intention in throwing out these hasty observations is with the view of inducing some of our intelligent readers to give expression to their opinions, as it is a question which not only largely affects the agricultural interest, but that of society at large.

CEMENT FOR GRAFTING.—The ingredients are: One pound of beeswax, one pint linseed oil, six pounds rosin. This cement will not run in summer nor crack in winter.

OLD ERIE.

[For the Country Gentleman and Cultivator.]

LIQUIFIED MANURE FOR GARDENS.

The "constant readers" of the Co. GENT. and CULTIVATOR, will probably recollect that some years ago Mr. EDGERTON gave us some account of the remarkable results which he obtained, in the growing of garden crops from frequent applications of manure in a *liquified* state, to the soil of his garden. Probably several of the readers of Mr. EDGERTON's account have been induced, before this time, to provide themselves with a tank and watering can in their gardens, so as to be able to imitate his example, and secure a similar luxuriance of growth. Could the experiences of all those who have made trial of Mr. E.'s method of enriching a garden be collected together into one pamphlet, we presume *all* who should read it would be so thoroughly convinced of its good results, that there would be a still more general adoption of that or some similar plan of applying liquified manure to gardens, and probably also to orchards, lawns, and ornamental grounds. Market gardens, especially, would be provided with the means of applying fertilizers in the *liquid* state, if all the testimony which has been given and might yet be given in favor of this method of securing large and luxuriant crops, could be laid before the owners and cultivators of such gardens.

We submit, for the present, the testimony of an English farmer and market-gardener who has been employing a system of liquid manuring, for several years, on both farm and garden. After stating that the quantity of milk was increased fourfold in the dry portions of summer and autumn, he says—"I had five acres of market garden, chiefly in onions and carrots, which, with the irrigation, became the most profitable part of my farm. I tried it with rhubarb with astonishing results, as also upon celery and asparagus, with very great improvement in the quality as well as the quantity. I am satisfied myself that the principle (that is, the system of liquid manuring) is very important for market-garden cultivation, inasmuch as there appears to be a larger development of saccharine matter, and less of woody fibre produced than in plants grown under the ordinary system."

Those who would like to try this system in their garden should sink a hogshead into the earth in a convenient corner of their garden, and liquify guano, hen manure, cow-dung, urine, &c., &c., with from six to ten or more times their bulk or weight of house-slops, suds or soft water, and after thorough stirring to secure a solution of all the fertilizing elements, allowing the solid or sedimentary portion to settle to the bottom, apply the liquid by a watering can, hydropult, or other apparatus, to the crops after or about sun down.

The communication of Mr. EDGERTON referred to in the commencement of this article may be found in Co. GENT., Dec. 28, 1854, and in CULT., Feb. 1855. The heading of the article is "How to Enrich a Garden."

☞ R. PARSONS, Esq., of St. Lawrence County, kindly sends us, charges paid, a sample of MAPLE SYRUP of his own manufacture, and as he expressly states, *not* with a view to a public acknowledgment of its reception. But its quality is too good to be merely noted, as he suggests, "in a private memorandum," and he will therefore pardon our taking this method of proving that its merits are appreciated.

TIGHT BARNS AND BARN CELLARS.—At a late agricultural discussion at Boston, the prominent practical farmers present took the ground that hay properly made is kept best in *tight barns*, and not those with cracks between the boards; and also that barn cellars were not injurious to the hay above, if well ventilated through wooden tubes passing up to the roof, and with tight floors—muck, &c. being used for composting the manure, and preventing the escape of the gas

HEN MANURE---COMPOST &c.

I have about 30 bushels of hen manure, and about the same quantity of ashes, that I wish to apply to my corn crop the coming season—soil a clay loam, a five year old timothy sod, plowed eight inches deep last fall. How would you advise me to use it? I have also a heap of stable manure made from my cows this winter—the pile is about 20 by 40 feet, 5 feet high I wish to use it as a top-dressing for rye next Fall, to be harrowed in with the rye. How can I keep it best? The pile lays out in an open field. I have used flax shives for bedding, removing them daily as they became saturated with urine, so that the pile consists of perhaps one-third flax shives.

Raymertown, March, 1862. N. V. N.

The hen manure may be managed in different ways. The easiest is to pound or reduce it to a powder, then mix it with the ashes, both being quite dry, so that the ashes will not act on the manure before it is buried. Then plant the corn with such a planter as Billing's, which drops concentrated manure at the same time the corn is dropped and buried, but with a small space of earth between the manure and seed, to prevent injury to the latter. Or, if such a planter is not at hand, drop the corn by hand in hills, cover it half an inch or so with earth, then drop a small handful of the mixture, (scattering it several inches about,) and then cover with a little more earth. Or a handful of the manure may be thrown down where the hill is to be, and quickly mixed with earth by two or three strokes of the hoe, and the corn then dropped and buried the usual way. Such manures are usually more efficient applied in the hill, especially on inverted sod. If the corn is planted in drills, a more thorough intermixture of the manure with the soil may be effected by first furrowing out the land, then strewing the mixture thinly along, and then drawing a one horse cultivator, set narrow, along the furrow. Or still better, attach a horse to a small log of wood, and drag it along the furrow, which will grind, pulverize and mix well together both manure and earth. The corn is then drilled in. Another way is to compost the hen manure with several times its bulk of fine loam or peat, but this is attended with more heavy labor in mixing and in application, which will be hardly compensated by the increased advantage.

The heap of stable manure, if already composted with large quantities of straw, scraped soil, &c., may lie as it is till autumn; but if not so composted, draw it out as near as practicable to the spot where wanted, and make it in equal alternate layers with loam or turf—the layers of each to be as thin as can be spread, to effect more thorough intermixture. By next autumn the heap will be valuable compost, which may be broken fine in the process of drawing and spreading.

WASHING CORN.

The healthfulness of corn as an article of food is admitted by all, yet after it has lain for a few months in a crib infested with rats, cats, and other vermin, as is most generally the case, its *palatableness* becomes a matter of taste.

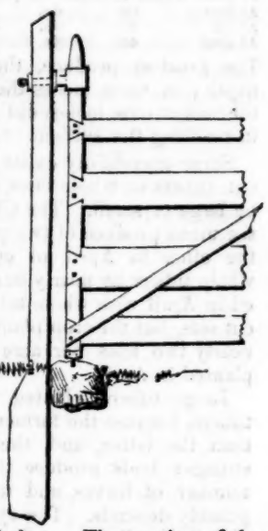
For several years we have been in the habit of washing what corn is used in the family, and find that it greatly improves it. Take a brass kettle or large tub half full of nearly boiling water; put in your shelled corn and let it remain for a few minutes, then stir it briskly with a paddle, and you will be surprised to see how yellow the corn, and how much better the puddings, Indian bread and johnnycakes will be.

Some wash the corn on the ear, but when the cob gets wet it is a tedious process to dry it. When shelled it will dry thoroughly in thirty-six hours. It should be spread two or three inches deep on some clean surface, in a warm room, or if in the summer, placed in the open air and stirred occasionally. "Try it all ye that ne'er tried it before," if you want *new corn* the year round. St. Lawrence.

[For the Country Gentleman and Cultivator.]

HANGING GATES.

Messrs. Editors—As the season is approaching when we shall want our fences and gates put in order, and as I have had for the last twelve years a certain kind of common gate hangings, such as I have not seen described in your paper or elsewhere, I will try and describe it, with a rough sketch of the same.



This is drawn merely to show it as plainly as I can. The iron work costs about 62½ cts. for a gate. When well made of good iron, in my opinion, it will last from one generation to another. The advantage of these trimmings is that the gate swings either way if the grade of the ground permits. The upper end of the heel post of the gate being rounded, it is easily unhung at all times by simply being raised out of the stone at the bottom. The hole in the stone needs to be only about half an inch deep. The round part of the eye, as shown in the engraving, which goes through the gate post, enables the eye to turn, and the gate is slipped out below. The section of the heel-post of gate shows that there is a band required to strengthen that part of the gate, having stubs of nails put in to prevent it from falling off in case of the drying or rotting of the gate post. The iron pin in the bottom may be of three-fourths or seven-eights inches, and about five inches long, say three inches in and two inches out of the wood. I generally unhang all my gates as soon as the winter sets in, and in the spring it takes but a short time to put all in order. Albert Van Voast.

Pond Grove, Schenectady.

[For the Country Gentleman and Cultivator.]

COAL TAR AND ROSIN.

Messrs. Editors—Not long since an article appeared in one of your papers, inquiring whether coal tar and pitch applied to timber would preserve it from decay while under ground. The past year I have been experimenting with preparations of that kind, for the purposes aforesaid, and believe I have discovered a sure remedy or preventive of decay, which can be made as follows:

Take equal parts of coal tar and rosin; heat them until the rosin shall be dissolved and well intermixed with the tar; then apply it to that part of the timber you intend sinking in the ground.

To test the virtues of such a preparation, I took a sap shingle, split it in two pieces, one of which I smeared with coal tar and rosin; the other I left uncovered. I then drove them side and side in the ground. At the end of nine months I took them up, and found the progress of decay to have been very rapid in the piece uncovered, while the other was perfectly sound. This experiment fully convinced me of the efficacy of such a preparation, and if properly applied, I believe all kinds of timber would be rendered indestructable by decay. For posts I hardly think it necessary to cover more than twelve inches below and six inches above where the surface of the ground will come, as that part of the post is more exposed to the action of the elements, consequently needs the most protection.

I have not time or I would write more on the subject, as I consider it a very important one, and one of much interest to the farmer or real estate owner. And yet heretofore the preservation of timber has received but a small share of consideration in comparison with what has been said and written on other subjects. B. W. Rogers.

Bridgeton, New Jersey.

[For the Country Gentleman and Cultivator.]

Sowing Peas Broadcast or in Drills.

MESSRS. EDITORS—Some time since ACER stated in the Co. GENT., that peas might be made a good fallow crop, by sowing some of the smaller kinds in drills, and keeping the weeds down by cultivating with a horse, and asks who will try it. I have been experimenting somewhat with some half a dozen kinds of peas, and have tried them both ways, sown in drills and broadcast, and have found that the large Marrowfat pea, sown rather thick broadcast, much the best to keep the weeds down; which they do by their quick rampant growth and thorough and complete occupation and shading of the ground. While the smaller kinds, by their slower growth, give the weeds a much greater chance; and especially is this the case when sown in drills. It is also quite difficult to keep the weeds out from among the peas in the row, as the peas have a very slight hold of the soil, and are generally leaning or laying many different ways, it is very difficult to hoe out the weeds without hoeing up more or less of the peas; while to pull up the weeds after they get much size, would be sure to pull more or less of the peas also. But the Marrowfat pea saves all trouble by keeping the weeds under.

Of course this applies more particularly to the more common annual weeds. Though a more limited experience leads to the opinion that there are few, if any, sown crops better calculated than the Marrowfat pea to get and keep the start of such weeds as Canada thistles, and the wire and quack grasses. Though of course the peas cannot be expected to kill or run out these pests. F.

Orleans Co., N. Y.

[For the Country Gentleman and Cultivator.]

PRUNING GRAPEVINES.

MESSRS. EDITORS—"Inquirer," in your issue of March 27, asks for information as to the best time to prune the grape. He objects to doing it in January or February, because we are subject to sudden cold snaps, exposing the young wood, causing death or imperfect fruitage. He finds best success, under pruning done in March, and believes the bleeding of the vines does not effect the crop. He wishes to be informed as to the experience of other vine growers. I shall endeavor to answer some of his interrogatories, by giving my experience upon the subject. I have been in the habit of pruning the first day of February. I leave my vines on the trellis on stakes during the winter, and have never had them killed back by the cold of winter. After the fruit has set, I summer prune very thoroughly, believing that few vines are able to carry the fruit and ripen perfectly the large mass of wood that will accumulate if left to grow. Summer pruning has much to do in fitting and maturing the young wood to stand the severities of our winters, and I apprehend the absence of it does more mischief than any pruning done in January or February. The multiplicity of cares in the fall have thus far prevented my trimming my vineyards before the closing in of winter. My theory is, that the fall is the best time, and for this reason—the sap which is the blood of the vine, returns to the root in the fall, so much of it only being supplied to the vine as is necessary to give vitality to it through the long cold winter. All extra wood left to be cut off in the winter or spring, is an unnecessary draught upon the life-giving forces of the parent stock, and impairs to a greater or less extent its vigor. Given spring pruning, and free bleeding of the vine, and the solution will be a feeble, sickly vine, small and imperfect, thin of fruit, and a growth of wood entirely unfitted to stand the rigors and changes incident to winter. It cannot be proved by any system of logic, that bleeding the plant will add to its strength, vigor or perfection. OTIS F. PRESBREY.

Prospect Hill Vineyard, Buffalo.

[For the Country Gentleman and Cultivator.]

TERRACED VINEYARDS.

EDS. CO. GENT.—I perceive that some of your readers felt a little disappointed at the opinion expressed in your No. of Feb. 13. Such a side-hill as your correspondent there speaks of, would indeed be impracticable. I cannot but think that he is mistaken, and has formed an opinion at random. We know of no hills as steep as 45°, unless composed of rock; such a descent could not be cultivated. At the same time I cannot quite subscribe to your opinion that "terracing is not suited to this country;" at least I have not found it so in my practice, having planted vineyards on terraced and level land, and always finding the result in favor of terraces. The soil here is a rather light loam, mixed with more or less gravel, and sometimes approximating to sandy. About twenty-five years ago I terraced a side-hill of this description, too steep for cultivation by the plow on account of the washing of rains. The field was well filled with natural grasses, forming a strong sward. Having no side-hill plow at command, I broke it up with the common plow, throwing the turf and soil down hill by repeated plowings, of course plowing one way only. Then with workmen furnished with common dung forks, selected or shook out the broken pieces of turf and laid them up like a wall at the bottom of the proposed terrace, without regard to much order as to which side of the soil was uppermost, and worked the loose soil down against this embankment until the upper or flat portion of the terrace was level. The terraces were laid 10 feet wide, and the grass bank required to be 2½ feet high, leaving fully eight feet or a little more for cultivation. The vines were planted in rows one foot from the bank. Finding the labor considerable in making a terrace so wide, I laid a part of them 8 feet, but found afterwards that the wider terraces gave the largest and best crops of fruit. The grass or sods thus promiscuously piled up soon commenced growing and formed a strong wall of green, requiring to be mown once at least every year, and is still strong and unbroken; it also requires re-trenching, by cutting the edge next the cultivated ground with a spade and turning under once a year; likewise the space between the edge of the grass and the rows of vines, and this I regard as the consequence of an an error in planting. Instead of setting the rows of vines on one side, they should have been planted in the middle of the terraces, which would have lessened the amount of hand labor, allowing nearly all to be done with horse and plow or cultivator.

At the time I made no notes of the cost of terracing, but my impression is that no very great expense attends the terracing of such land; a large portion of the work can be done with a good side-hill plow and team. If the ground is not seeded so as to furnish turf, then the embankments must be sown at once with grass seed. Our experience here is rather in favor of side-hill for vineyards, and terracing can be made the means of reducing much of the hilly slopes to a condition very favorable to the cultivation of other varieties beside grapes—such as dwarf pears and indeed nearly all the small or dwarfish kinds. R. M. CONKLIN.

Cold Spring, Long Island.

[For the Country Gentleman and Cultivator.]

BEE-FEEDER.

For feeding bees, there is nothing more convenient than Eggleston's Patent Bee-Feeder. It is readily adjusted to any hive, and will work admirably. Not a robber bee can gain access to the honey; nor will the bees, while feeding, get drowned, or even get their feet fast in it. Yet the honey is always in reach till all is taken up. I have had one for two years. It is somewhat costly, but when one has but few bees, and wishes to get along with the least possible trouble in feeding his bees, he will find this arrangement just adapted to his wants. M. QUINBY. *St. Johnsville.*

[For the Country Gentleman and Cultivator.]

MODES OF HARROWING IN WHEAT.

As winter wheat requires the protection in spring of a somewhat rough surface, as well as putting deeper into the ground, both on account of frost heaving, it will be understood as well as by the season of the year, that the few suggestions I offer below apply to spring wheat and other grain, but not to fall sown wheat.

There appears to be a difference of opinion as to the propriety of cross harrowing *after* the wheat is sown. I fully agree with J. L. R., that it is always—except the ground were very dry—best to harrow down smooth *before* sowing. I have pursued this course for twenty-five years, because when there is moisture enough to bring the wheat up, it cannot be put in too near the surface, if well covered. If the ground is not harrowed before seeding, about half the wheat rolls into hollow spaces, and when covered is about two inches deeper down than the balance, and so much deeper than is of any benefit to it. The same cause—inequality of surface—makes it patchy, or twice as thick in the low places as on the higher ones. And having to work its way up by unnecessary underground growth, weakens the growth to some extent.

But I have found another decided advantage from harrowing down before sowing. The seed that is covered nearest the surface gets the start in growth, and *maintains* it all the season. That which is covered deeper maintains about the *same* rate of growth, but does not ripen so soon, because it does not come up so early, and the deeper covered must grow *faster* than the shallow planted, to come up with the latter at maturity or harvest—and is consequently from one to three days later in ripening, thus causing an inequality in this respect at cutting time, that is sometimes quite perplexing in deciding when to cut. A piece of four acres which I harrowed twice before sowing last year, ripened more evenly than any one of six other pieces. The height of the wheat straw, also, was more equal. And it would follow from both facts, that the sample was more uniformly good, which is correct.

As to whether cross harrowing is not beneficial, I have strong doubts. My opinion is in favor of cross harrowing properly performed. The impression that it uncovers more wheat than it hides, arises I think from using the *same* harrow. Going one way the teeth throw up ridges; when they are crossed with the *same* harrow and same weight, the teeth going down about the same depth, similar new ridges are formed out of the previous ones, and wheat is thus unavoidably raised up and uncovered. But if the harrowing be well done, this will not happen to any injurious extent. But to do the work well there should be three harrows—or pairs if you have them—each of different weight and width between the teeth. I have for many years used three sizes of harrow in harrowing in wheat; and this was the general practice in England, I am assured, for a long time past, with understanding farmers.

I harrow down with the heaviest harrow before sowing. Then sow, and cross with a harrow that is lighter, with closer set teeth. Then cross this harrow course with a *light, one-horse* harrow. Mine has three-quarter inch *steel* teeth. The ridges and indentations of the heaviest and first harrow are largest. The second harrow—middle weight and sized teeth—does not reach so deep as the heavy one would, but fills up inequalities and levels down much more the larger marks of the heavy harrow. The light harrow still *works* the surface down, instead of thrusting up ridges as the heaviest one would.

The general result of using three harrows of graduated weight, and finer and closer set teeth, in proportion to weight, is a generally level and fine condition of surface mold as to the soil. The wheat comes up sooner, more evenly, and gets a more uniform and vigorous start, and a good start is very essential to maintaining the lead in a race of growth. For myself, therefore, I prefer to use harrows of three sizes across the course of one another; and sometimes I have, on rough ground, used the one-horse harrow twice in a place, crossing its previous course the second time; and I always find the essential work of *pulverization* and leveling—and consequently the covering of the seed by increasing the quantity of *fine* mold—much more complete from the same extent of labor performed in this manner, than I ever saw from harrowing in the wheat one way of the land only, and with the incomplete outfit of merely one or more harrows of about the same weight and general construction. I have already commenced putting oats in in this way, and will treat fifty acres of Club and Fife wheat in the same manner; for I consider using the same heavy harrows to level down the soil and cover the seed with fine mold, an inconsistent and incomplete mode of planting spring wheat, or any other spring grain.

J. W. Clarke.

Green Lake Co., Wis.

[For the Country Gentleman and Cultivator.]

Weights and Measures of Corn--Hills vs. Drills.

Messrs Eds.—The article last summer under the head of "Tape Line in the Cornfields," gave a statement of the average number of ears in fields of corn planted on the usual hill system, and also in drills by a new implement called the gage.

The average of the first was about 36 in 33 feet, and 50 ears in the same instance by the latter—the King Philip (improved) ranging as high as 64.

This called out much good information from your correspondents, and in some of the articles the size of the ears was brought in question. Intimations were made that the drills would be inferior.

"Young Farmer," page 75 Co. Gent., corroborates this theory by notes of his experiment. It should be remarked, however, with regard to his experiment, that his drilled corn was only 8 inches apart, giving about twice the number of spears in the same distance as in hills. He says it took 115 ears of the drilled corn to make a bushel, (of ears I infer,) and only 83 of that in hills.

Now I have three lots of corn, old yellow corn of 1860 raised in hills, yellow corn of 1861 raised on same ground in drills, and improved King Philip raised in drills. This last is not well ripened; corn, our seasons are not long enough for this variety I fear. The two last are the drilled corn referred to for the large number of ears as it stood in the field. I have measured and weighed with much care till I arrive at the following average results.

I first found that 104 ears of old yellow eight-rowed, raised in hills, made one bushel, measuring after the manner of men—that is, guessing when the bushel is full—and it weighed 35 pounds.

Yellow eight-rowed of 1861, raised in drills—it took 93 ears, weighing 39 pounds.

Of Improved King Philip, 77 ears, weighing 33 pounds. This is not first rate, sound corn.

Owing to the uncertain quantity of a bushel of *ears*, the above shows only one fact, that the ears of my drilled corn of 1861 are larger than that in hills of 1860, and larger than that of "Young Farmer," in hills, in the rate of 83 to 87, which difference another selection of ears might reverse.

For getting at some more accurate and intelligible result, I assumed what a corn buyer told me was a fact in this State, and among the New-York dealers, that a *bushel* of shelled corn was 56 pounds. Assuming this standard, I shelled the corn till I had got just one bushel, 56 lbs. Of the old yellow raised it took 200 ears. Their weight before shelling was 67.16 pounds—cobs weighed 11.16 pounds. The corn shelled 31 quarts.

Of the yellow of 1861, raised in drills, 168 ears weighed 70.2 pounds, shelled 56 pounds of corn, measuring 33¼ quarts. The cob weighed 14.2 pounds.

Of the Improved King Philip, from drills, 169¼ ears weighed 72.6 pounds, shelled 56 pounds, measuring 32 quarts. The cob weighed 16.6 pounds.

Although this last variety has a larger cob and less

weight per bushel in this case, yet the great number and length of its ears (sometimes 14 inches) would more than make up for the extra cob. I am very partial to this earing tendency; I can't see my way clear to a big crop with only four or five ears to a hill. If they grew two feet long, they would hardly equal the crops we read of.

Elmira, N. Y. TAPE LINE.

[For the Country Gentleman and Cultivator.]

My Dairy---A Simple but Efficient Churn.

I keep from 12 to 15 cows, stabling them from Nov. to May—did this, however, only last winter and thus far this winter. Being deeply in debt and having no money, I concluded in the fall of 1860, to build a cow-house on the cheap plan. Hired man and myself built one at a cost of about $5, capable of holding 12 cows. We set up corner posts—plate on top and covered with straw. It works very well, being warmer than when covered with shingles. I fasten my cows with stanchions. My spring-house is 18 feet square, ballooon frame—studs 8 inches deep, boarded inside of building as well as outside, and the interstices or spaces tightly filled with dry saw dust—10 inches of saw dust over the ceiling—the floor is of brick, laid on 4 inches of gravel, and that is on 2 inches of plank, making the floor rat proof, but self-draining.

By using fine wire blinds for the windows in summer, I am not troubled with flies; and with plenty of cold well water or ice thrown on the floor, I am not troubled with the heat. I use a small tin bucket of hot wood coals occasionally through the day to keep the house warm in winter, and find no difficulty in keeping the thermometer at from 50° to 60°. I have only had the experience of this winter with it. I had no spring and could only study out a house like this. I have never been on a dairy farm, but suppose this kind of a milk house would not do for your New York dairies.

In churning I first tried a patent churn or two, then the old fashioned dash churn, but finding that, without horse power or other animal power, churning was a never-ending job, I laid all these aside, and made myself a square box 18 by 18 inches, hung it on gudgeons and frame, with one extension for a handle, and now have a churn which I have used daily for 8 months, and which, for ease of turning and *real efficiency*, cannot be *equalled* by any *patent* churn in New York. There are no paddles—"no *nuthin*" in it, being but a plain oaken box. The sides are the dashers. I have given it a full trial, and am satisfied that it is the true principle. I got the idea from "Flint's Milch Cows," a book by the way which I think every farmer ought to buy.

I have a corn cutter—home made—which is very efficient—never out of "kiltur"—but which I will describe, if you please, at another time. R. S. L.

Harrison, Co., O.

[Flint's "Milch Cows" is sent postpaid by mail on receipt of $1.25 at this Office. Eds.]

[For the Country Gentleman and Cultivator.]

Introduction of the Potato into the U. States.

Messrs. Editors—To answer the inquiry of "A Co. Gent." of New Britain, Ct. as it is put, would be to say that the potato was introduced into America by the Creator "in the beginning" or since, as it is one of the indigenous productions of *South* America. But *the question* probably is when was it introduced into the United States? Answering that question in full will also explain why it is called the Irish potato, as was perhaps the case years ago more than it is now with us, and still is at the South in distinction from the sweet potato.

The only authority I know of in relation to the matter is Belknap's History of New-Hampshire, and as the book is not common, I will give, as briefly as possible, the substance of that historian, and if there is further or other information upon the matter, we shall all be glad to receive it.

In 1719 a large number of emigrants came to this country from the north of Ireland and settled a township which they called Londonderry. They were called Irish, and there was no little antipathy felt toward them, which would have been very foolish even if they had been natives of Ireland, but they were from a colony of Scotch presbyterians that had settled in the province of Ulster, Ireland, in the reign of King James I. They had a thirst for civil and religious liberty which their situation in Ulster did not satisfy, and nearly the whole colony removed to America. About one hundred and twenty families came. One hundred families came to Boston, and the rest landed on the coast of Maine. Of the former about sixteen families were those who made the settlement of the town of Londonderry. The historian referred to says: "These people brought with them the necessary material for the manufacture of linen; and their spinning-wheels, turned by the foot, were a novelty in the country. *They also introduced the culture of potatoes*, which were first planted in the garden of Nathaniel Walker of Andover. They were an industrious, frugal and *consequently* thriving people." Hence, these people being called Irish, the potatoes which they introduced were called *Irish potatoes*. A. B. B. *Randolph, Mass.*

[For the Country Gentleman and Cultivator.]

GOODRICH'S SEEDLING POTATOES.

Eds. Co. Gent.—In the spring of 1861 I obtained a barrel of Mr. Goodrich's Seedling potatoes from him at Utica. The barrel contained half a bushel each of five different kinds, and I was so much pleased with their product that I wish to give a statement to the public through your columns.

The land was a rich loam, some gravel and clay, and had borne a crop of wheat the year previous. No manure used, but it was heavily manured for tobacco, which grew upon it two years previous.

I cut the potatoes, leaving two or three eyes in a piece, and planted in drills, dropping the pieces about 1½ feet apart in the row. Planted April 22d.

When dug they were perfectly sound, excepting a very few of one kind, the "Copper Mine," and they were so large and productive that I took pains to measure the ground, and with the following result:

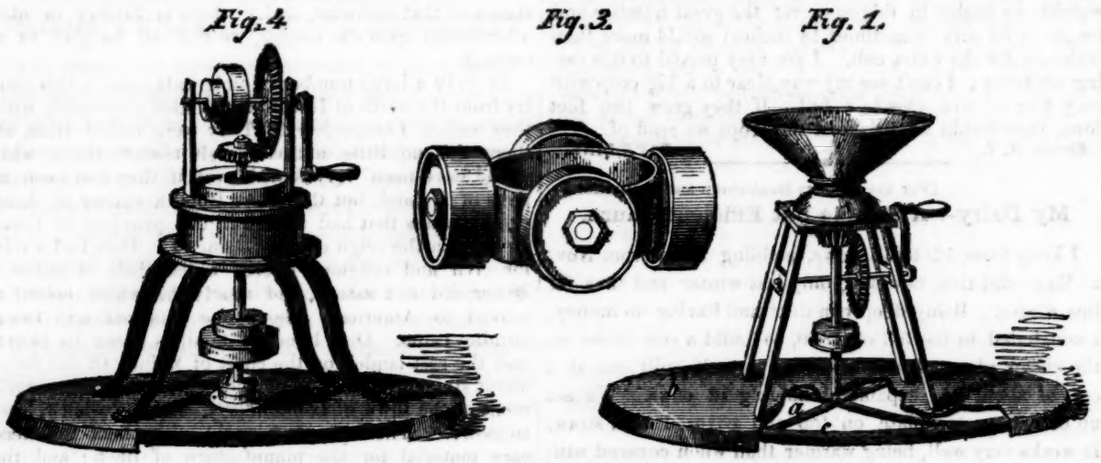
Garnet Chili—14 bushels—at the rate of 378 bushels per acre.				
New Kidneys—25 bushels	do.	400	do.	do.
Pinkeye Rusty Coat—17½ bu.	do.	475	do.	do.
Cuzco—20 bushels,	do.	560	do.	do.
Copper Mine—22 bushels,	do.	594	do,	do.

In planting, some varieties covered more ground than others, from having more eyes, or more small potatoes; hence the reason why the product of each half bushel varied so much.

I think Mr. Goodrich's Seedlings are a valuable acquisition, and I hope he will find the farming community ready to appreciate his efforts to grow a potato which is hardy, productive, and of good eating qualities, all of which are to a great extent combined in the sorts I raised last year. Samuel J. Wells. *Fayetteville, N. Y.*

P. S.—As I have no potatoes to sell, I would refer those who may want to Rev. Chauncey E. Goodrich, Utica, N. Y.

Strange Disease.—The "Valley Star," published at Newville, Cumberland Co., Pa., of Feb. 20, says that a singular disease has appeared among the cattle of Wm. Smith, near Oakville, in that county. The disease commences on the side of the head and nose, causing the animal to rub, in some instances, until the skin is rubbed off, and the eye rubbed out. Some eight or ten hours after the disease appears the head commences to swell, and in two hours thereafter the animal is dead. It is supposed to be contagious.



IMPROVED MODE OF HANGING FLYWHEELS.

The accompanying engravings illustrate an improved mode of hanging flywheels, which is quite novel, and possesses some important advantages over the plans in general use. The wheel is placed in the base plate of the machine on a vertical shaft, and the shaft may either run in a step in the usual way, or it may be supported by a collar running on friction rollers.

Fig. 1 of the engravings represents the wheel as applied to a grinding mill, with the shaft resting in a step in the cross bar, *a*, which crosses the base plate of the machine beneath the wheel. The base, *b*, is a large circular disk as shown, supported by a narrow rim, thus affording a space in which the flywheel, *c*, is placed.

The rollers are attached to a ring as represented on an enlarged scale in Fig. 3; the shaft passing through the axis of the ring, and the rollers running upon the upper surface of the base plate. In this case, the rollers and ring are inclosed in a tight box, *d*, as shown in Fig. 4; here the wheel is represented as applied to a rice and coffee huller.

Among the advantages of this mode of applying flywheels, are the following:—

1st. Wheels may be used of any desirable diameter, and as the efficiency of a flywheel depends as much upon its diameter as upon its weight, wheels of equal efficiency may be used much lighter than those of the usual form.

2d. The shaft running on a step, or on rollers, there is very little friction.

3d. The flywheel is entirely out of the way where it does not incommode the operator nor endanger his limbs.

4th. While a flywheel suspended in the usual manner upon the side of a mill, causes the mill to be top heavy, and in case of any wabbling in the wheel, resulting from inaccuracy in hanging, tends to shake the mill, this flywheel by being placed in the broad base gives remarkable steadiness to the machine.

5th. Another important advantage in the use of flywheels, as above shown, is, that the *size* and *weight* of the wheel may be *specifically* adapted to the capacity and requirements of the machine. And in running flywheels in this way, the *weight* of the wheel, which, heretofore has had to be sustained and carried on the upper and *working parts* of the machine, is sustained on the point of the upright shaft, relieving the working parts, and allowing the machine to derive the full benefit of the momentum of the wheel, without the friction hitherto engendered by the *weight* of the wheel.

This invention has been secured by J. Bryant, M. D., Brooklyn, N. Y. (See advertisement on another page.)

[For the Country Gentleman and Cultivator.]

THE MOST PROFITABLE SHEEP.

In my article on Sheep and Wool-Growing, &c., page 108, I promised to continue the subject of breeds, weights of carcass and fleece, &c., most desirable for profits, &c. Would be pleased to fulfil this promise at considerable length now, but time will not permit; still I cannot forbear touching upon the subject, by noticing an article or two on page 172, Co. Gent. of March 13.

1st. I. D. G. Nelson, in commenting upon your editorial article in a former number, falls in with the idea that is becoming much too prevalent—in my humble opinion—that "*mutton* sheep husbandry" *exclusively*, is the most desirable system. Surely the followers of this *one* idea system of mutton—without regard to fleece—(if you accept the term,) must be *generally* novices or gentlemen husbandmen, to accept its teachings and reject contrary *facts*. Old sheep-men *know* that a fine wooled carcass is easier kept than the larger open wooled coarser muttons, and more than this, the *heavier* the fleece the more easily kept in condition. Surely this is good philosophy. The fleece retains animal heat, and the animal requires *less* food to lay on flesh than if the body were more exposed.

2d. I reject the idea in toto, that any epicure can distinguish *varieties* (if you please) of mutton by the taste only. John Johnston, the observant husbandman, and whose opinion is entitled to as much weight on any questions of Stock or Agriculture as any other man on this Continent, because practical and experimental, gives a *trial test* at a dinner a this residence, of this very question. A fine cut of mutton graced the board. Gentlemen present pronounced it fine, and classed it of the South-Down or other mutton varieties, (my memory is at fault on the decision of the particular *stock*.) The host was appealed to, and took the conceit entirely out of his epicurean friends by the remark that it was *Merino*. But for the sake of the argument only, let us admit that the finer wooled sheep are *inferior* for mutton to the larger sorts. We are all after *profit* in all our stock and farm arrangements, and that the Merino will give *more* wool, commanding a *better* market, at a *less* expense of food than coarser sorts, is a recognized *fact*. After this, the carcass for mutton will *pay* as well—the less expense of production considered—as *any other variety*.

Again: It is *fine* wools, not *coarse*, that our manufacturers desire, to make up the millions of lbs. deficit of our home consumption. Coarse wools are easily obtained from abroad—not so with fine. We *should* and *can* grow all we demand.

Because many amateurs have imported coarse mutton varieties, and are breeding them to distribute for general adoption, is no valid reason why all sheep husbandmen of this Union must reject the tried profitable sorts of fine wooled sheep, for the larger, coarser mutton producers.

Spanish sheep—(I have none to sell, want to purchase) of a weight of carcass (ewes,) not to exceed 80 to 100

lbs., can be made to yield by judicious crossing, 5 to 8 and even 10 lbs. of wool each, besides raising a lamb yearly. This wool will command from 40 to 50, or 55 cents per lb. These sheep can be kept at about one-half the expense of the large sorts, and when desired to convert into mutton, will bring more than half—to say the least—of the other varieties. Besides this, the mutton is as equally desirable as that of any other kinds.

No, no, brother sheep husbandmen, let us not reject our Merinos, or other fine wooled, easily kept, neat carcassed flocks, for the mutton sorts too hastily. Should we do this, soon our markets will be overstocked with mutton, and the return in dollars for this mutton will be sent abroad to purchase fine wools, or the English manufactured production from that wool, to supply our clothing demands.

Let us view this matter rationally,—not with prejudice—looking to our best interests and the demands and needs of our manufacturers and the country. We must have something besides mutton, else the profits will be minus.

The length of this article is such already, as to preclude much greater continuation; still I cannot resist the temptation to notice (as sustaining my propositions previously advanced,) the article on same page from your valued contributor Mr. GEO. GEDDES.

The table of weights of the Sweet Brothers' flocks, prove that it is *not* the larger carcass that gives the *greater* return of wool. I advance that it is the compactness of fibre on that carcass, that gives the yield and profit. A friend of mine has a flock of about 100 head, mostly ewes, that raise lambs weighing from 75 to 100 lbs. each, that have clipped 7¾ lbs. of clean, fine, well-washed wool, commanding from 50 to 55 cts. per lb. A buck, weighing some 140 lbs., sheared last clip 18 lbs. 2 oz. fine wool. The bodies of this flock are round, neat, and well wooled, no bare, exposed spots, but wool of an even firmness all over carcass. The *heaviest* clipping ewes of flock, are in the best condition, and consume the least feed to attain and retain that flesh.

Now shepherds and sheep-growers, for wool or mutton, let us make a note of the idea advanced by Mr. Geddes, —let us attain results in the manner of the Messrs. Sweets,—making comparisons and thus arrive at *facts*—aye *these* are what we want; no fine spun theories, but correct, demonstrable truths. The attainment of these will allow us to act understandingly, and from them, and the observation and experience of others, may we decide which are the most profitable, fine or coarse wools—large or small sheep. If this be done, I have no fears of South-Downs or any other large varieties, superceding our hardy, profitable Merinos. "W."

London, Madison Co., O.

[For the Country Gentleman and Cultivator.]

A GOOD STOCK BARN.

MESSRS. EDITORS—In reading that excellent letter of JOHN SHATTCUK'S, in Co. GENT. March 6th, page 156, I notice he wants a barn so arranged that he can have access to any mow of hay when he wishes. I have a barn for stock with six mows for hay, so that each mow can be got at any time. It is 30 by 40, with floor in centre; then 50 by 28, with 12 feet floor on one side. Two mows in the 30 by 40—one each side the floor, and four mows in the 50 by 28—a division between each bent. Hay goes down between the floor and mows. My barn is an overshot—three stories—28 feet posts, and every thing suits me about it except the manner of saving manure.

My stabling is in the part of barn 30 by 40—use stanchions and platform with gutter for droppings; yet I think a cistern 3 feet deep with a slat floor over it, would save the urine better, and by having the slats easily taken out the whole might be loaded on a sled and drawn where wanted about once a month, thus saving one or two handlings. EDMUND ROSE. *Delhi, March 15th.*

[For the Country Gentleman and Cultivator.]

THE EGGS OF THE LACKEY MOTH.

There is not an insect more universally known in our country, than the American Lackey Moth, or as more commonly known by the name of the Apple-tree Caterpillar. Its cobweb-like nests may everywhere be seen during next month, and the fore part of June, upon apple and cherry trees. These insects are much more numerous some years than they are in others; for instance, in the years 1846, '49, '56, and '58, they did great harm to apple-trees; and I think they will prove to be more abundant during the present year than they ever have been known to be at least in this vicinity, although I hope to be deceived in this respect, but circumstances cannot possibly permit such a lucky disappointment.

The past week I have destroyed millions of the eggs from which these caterpillars hatch, often finding from three to four nests within four or five inches of each other.

The best time to destroy them, is before they hatch and do mischief. The eggs may be easily discovered before the leaves start, by a careful observer. They are generally placed on the twigs near the commencement of the last year's growth, in clusters, forming cylinders or rings, generally surrounding two-thirds, and sometimes the whole branch, as shown in the annexed cut.

The rings often contain about three hundred eggs. They are generally three-fourths of an inch in length, and the tenth of an inch in thickness.

As I am afraid of occupying too much space in your columns, I must be brief upon this subject, by saying that I consider the best way to remove the eggs, is to place them between the thumb and fore-finger, and wring them from the branch, being careful not to leave any part of the nest sticking fast to the bark, as they sometimes break apart very easily.

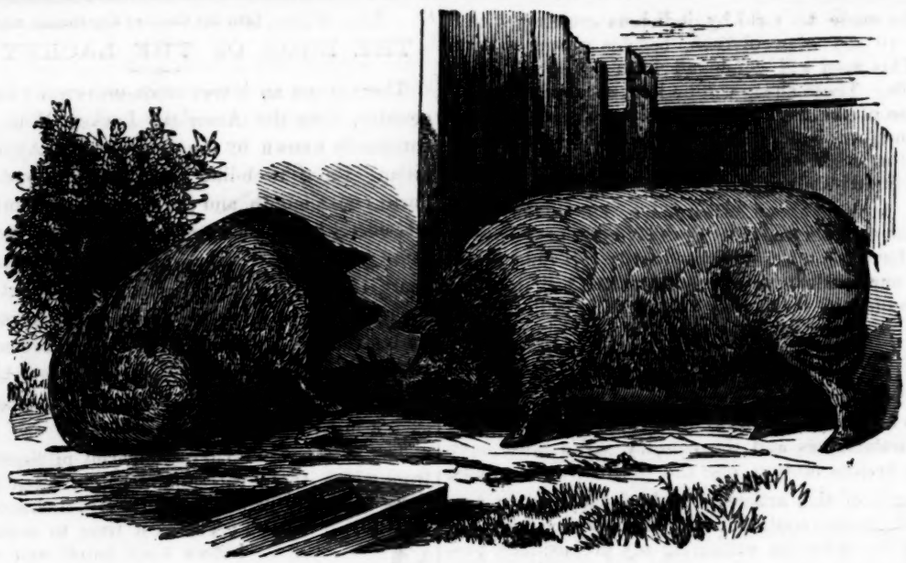
I request of those living in various parts of the country, having orchards, to make examinations, and state the result of their success through the COUNTRY GENTLEMAN.

Washington Hollow, Dutchess Co. C. R. C. MASTEN.

[For the Country Gentleman and Cultivator.]

MANAGEMENT OF POULTRY.

MESSRS. EDITORS—In Co. GENT., page 208, E. M. wishes a remedy for a disease which has broken out among his poultry. I think he is killing them with kindness. The disease is a distemper which breaks out among poultry where too many are kept together. There shouldn't be more than a dozen kept together in one apartment. I remember a few years ago my father had a small coop and over stocked it, and this distemper broke out among them; and carried off a great many. I don't remember how it was stopped. There was a doctor in the city who overstocked his yard, and this distemper broke out among them. He tried almost everything, including Cayenne and black pepper, which sometimes cures, but it did'nt do any good. As a last resort he mixed up the meal in clear castor oil. He said he would either kill or cure. It physicked and cured them, and he lost no more. I think E. M. had better turn them out of his poultry-house and let them shift for themselves, and roost on the trees and have the fresh air. A neighbor near here keeps from 30 to 40, and has no poultry-house. They roost on the trees in the orchard all the time. They look bright and healthy, but do not lay much in cold weather. I do not state this method because I am in favor of it, for I am not; but to show that poultry need pure air. I am in favor of warm houses, but a remedy for a disease must be different from the manner in which they have been kept. D. DAVIS. *Fall River, Mass.*



PURE CHESTER COUNTY PIGS

The above engraving, from a photograph of two of my pure stock of Chester County pigs, gives a fair representation of the prominent points of the breed. The pure Chester pigs are believed to have originated at least thirty years ago, by crossing a Bedfordshire boar, imported into Chester county, with the best stock of that county. By careful selections and breeding their valuable characteristics have become established, so that they may now be considered a distinct breed. They are known by their pure white color, great length and depth of carcass, small head and offal parts, capacity for growing to a large size, quiet habits, and easy feeding and fattening.

Philadelphia, Pa. PASCHALL MORRIS.

DRAWING WATER.

Will you, or some of your correspondents, favor us with a description of the best mode of drawing water, so as to have it fresh and good, with none of the bad taste of a pump? G. R. N.

Many contrivances have been devised for drawing water. The tubular pumps are compact and convenient, but do not furnish so fresh and pure water as the chain pump, which stirs the contents of the well every time it is used, but which in turn has some serious defects. The "old oaken bucket" is still preferred by many.

Inventors have tried their skill to remedy the inconveniences of the bucket striking the stones at the sides, in its passage up and down, and of requiring the use of the hands every time in emptying. But as the complexity of the machinery is increased by such contrivances, so is their liability to get out of order. There is one, however, that is comparatively simple, at the same time that it is quite efficient. The following is a description:

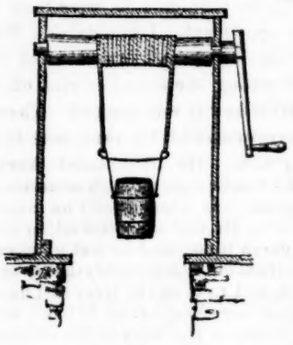


Fig. 1.

A curb is made, and a cylinder about six inches in diameter, turned by a winch, is placed horizontally across it. A cord, whose length is twice as great as the depth of the well, winds upon this cylinder, from the middle towards the ends, as represented in the cut, (fig. 1.) The bail is fastened about one-third or two-fifths down from the top, so that the pail is easily tipped in emptying. The form of the bail, and the places where the cord is attached to it, is also indicated by the figure. Being thus attached,

Fig. 2.

these cords stiffen the pail in its position, so that it will swing but little, and they keep it to its place while emptying. A hook, projecting over the spout, catches the pail, (fig. 2,) and one turn of the winch inverts it, and discharges its contents. The spout should not be fastened in its place till a few trials determine precisely where it should be.

There are two ways of filling the pail. One is to have a valve in the bottom, covering a three-inch hole; and the other is to have a heavy hoop at the top of the pail, so as to tip the mouth in the water. The valve is easily made by nailing on one side a piece of leather considerably larger than the hole, and a piece of board to the top of the leather over the hole, the leather thus forming the hinge. Good cord, half an inch in diameter, will be quite large enough, being thus double; and if the well is 30 feet deep, it would wind so as to spread to 20 inches wide. Very deep wells might have larger cylinders, or cord one-third of an inch diameter, or both. The cylinder should be evenly turned, in a lathe. The bail is made by giving the rod of iron which forms it one turn at each corner, and the two eyes thus formed should be nearly as remote from each other as the breadth of the coil of cord on the cylinder, when the pail is at the top of the well.

Tanning Sheep Skins with Wool on, for Saddle Covers, &c.

An exchange says, sprinkle over the flesh side of the skin a powdered mixture of one part alum and two saltpetre, and fold this side together, and hang in a cool place. The process is completed in two or three days, or as soon as dry, by taking it down and scraping the flesh with a blunt edged knife till clean.

A DAY AT GENEVA.

A passing visit at Geneva, on the 10th, gave us a pleasant glimpse of the improvements which E. SHERRILL, Esq., has been carrying out upon the farm purchased by him just on the northern limits of the village, about two years ago. It possesses many natural advantages, but had suffered badly from neglect. Mr. S. has remodeled the buildings or put up new ones, re-fenced and drained the fields, and entered upon a system of culture which bids fair to become remunerative as well as permanently productive. Although warned by some against *deep plowing* for the corn crop, he determined that that should form no exception to the newly established rule, and the experiment last season proved remarkably successful. The feeding of stock enough to provide the necessary manure, is to form the basis—with deep plowing, thorough draining and an appropriate rotation, as co-operating supports—of all his undertakings, and we shall watch and hereafter report upon their progress with much interest. The farm buildings are simple and very convenient; and a thriving lot of cattle, which have been wintered largely upon cut cornstalks, now await a summer's pasturage to close up their account with the farm. Mr. S. proposes to keep hereafter quite a flock of sheep, and has decided upon the fine wooled as promising him the best returns.

With Mr. SHERRILL and Col. JOHNSON we also spent an hour at "White Springs Farm," where JAMES O. SHELDON, Esq., has built up a Short-Horn herd, now including we believe between fifty and sixty head, and a flock of some of the best South-Downs "on this side the water." Situated almost in the heart of one of the finest and wealthiest farming districts of the State, this herd should be matter of pride throughout all Western New-York, and its ready accessibility and great attractions ought to make it the goal of many and frequent visitors. It affords us pleasure to know that such is beginning to be the case, and that Mr. S. has recently made a number of sales which would have been thought creditable to the interests of the breed, in brighter times than these. We obtained permission to publish the particulars, but they are not yet at hand, at the present writing.

When the season is sufficiently advanced to see more of the farmers and farming of Seneca and Ontario, we hope to call upon a larger number of our friends among the thorough-going farmers of these well cultivated counties. The spring at present is rather backward, and the freezing and thawing of night and sunshine alternately, may have done some injury to the young wheats. But it is hoped that no serious damage has yet been inflicted, and that the coming harvest will bring in a crop of at least the usual extent.

In the afternoon of the 10th, we called at the extensive breeding stables of JOSEPH WRIGHT, Esq., near the village of Waterloo, and upon Judge SACKET at Seneca Falls, whose yards contain some very pretty specimens of fattening steers, including one exhibited at Watertown last autumn, which last is still making fine progress, and promises to attain an unusual weight.

☞ The Annual Exhibition of the Rensselaer County Agricultural and Manufacturers' Society, will be held on their grounds at the city of Troy, on the 17th, 18th and 19th days of September next. The President, Hon. L. CHANDLER BALL, has issued a circular note to the farmers, manufacturers and mechanics of the county, calling their attention to the great importance to themselves and the country," of putting forth their best efforts to increase the amount of their several productions, and of placing the best specimens of each on exhibition, where their excellence may be made known, and purchasers secured." We infer from a private letter received from Mr. BALL, that Gov. HOLBROOK of Vermont is expected to deliver the Annual Address on the 19th.

The Farm should not be Overstocked.

In writing and speaking of the lessons of English Agriculture, we have always placed in the foremost rank, the fact so clearly shown throughout its whole history, that the live stock of the farm has there increased with the increase of its cereal crops—or rather, that one reason why English farmers produce more grain than we do, and upon a far smaller surface, is because they keep *more stock* and devote a far larger surface to the growth of crops exclusively for their stock.

If, however, this is interpreted to mean that our farmers ought to keep more sheep and cattle on their farms *whether they grow hay and roots enough to feed them on or not*, it is very bad advice. The *first* lesson which the good farming of England or any other country, invariably teaches, is that whatever is undertaken pays best in the long run, when it is done thoroughly and well. We can obtain more and better manure for our crops, from a few animals well fed and attended to, than from a larger number that are just kept alive, and mainly left to take care of themselves. If we can save a year in the fattening of a sheep, or pig, or bullock, by more food and better care, we are saving ourselves twelve months' keep, are turning over our money twelve months sooner, and can consequently derive a greater profit by every step which tends to lessen the time of feeding, even if in order to do so, we considerably diminish the number we feed.

The excellent article on raising Lambs for butchers, in another column, from the pen of Mr. TAYLOR of New-Jersey, affords a striking instance in point. He shows from his own experience that he began by attempting too much; that he kept *reducing* his number of sheep and *adding to the profits* they yielded him, for several years in succession, and without any exception to the advantages that resulted. "Cut short your losses, but let your profits run on," is an old business rule very applicable on the farm. Animals which are kept so as not to be gaining from day to day, and from week to week, fairly come under the head of losses that are "to be cut short;" in other words, where there are so many of them as to be barely kept alive on the produce of the farm, it is entirely consumed in merely supporting them, and they are no better off at the end of the season than at the beginning; while with a reduced number, a proportionately smaller amount of food would support life, and all the rest would be converted into additional flesh, in which there would be room for a profit "to run on." Mr. TAYLOR, in a private note justly adds, that "instead of having the country overrun with great numbers of animals stunted and starved, a smaller number kept as they should be, would result in far greater pleasure, credit and profit."

It is for this reason that we have never united in the outcry which one or two noisy advocates of keeping stock "in just a thriving condition," always raise whenever they see a Short-Horn whose ribs they can't count at the first glance. Over-feeding, especially of prize animals, has unquestionably become a great evil in England—it may eventually be an evil here. But the danger is as yet distant. We do not preach against the sins of people in other countries, as some ministers have a way of doing; but prefer to call the attention of our hearers, if possible, to the error of their own ways. And, aside from the merits of one breed or another, as exhibited at our Agricultural shows, we regard it as their especial mission to present, so glaringly that the wayfaring man though not very bright cannot fail to observe it,—a lesson in the good keeping and care expended upon all breeds and classes of our domestic animals,—a lesson which the farmer, going home, will act upon, emulating what he has seen, until the "comparative anatomy" of his cattle or sheep, shall become to him a much more difficult study than it now is from the living example.

A man wit' a long head is not very apt to be headlong.

LETTER FROM HON. A. B. DICKINSON.

Suggestions about the Treatment of Different Soils.

LEON, Central America, March 1, 1862.

MESSRS. TUCKER & SON—Your valuable paper of 19th December has been received, and was truly a welcome visitor, as it was the first I had received since my arrival in a country where such a thing as an agricultural paper is unknown.

It is a singular fact that while more than one half of the whole male population of the globe are engaged in agricultural pursuits, I have never yet seen an agricultural journal for sale on steamboats, cars or other lines of travel, or at any place except at the offices where they are printed; and yet all of the above places (especially in our own country) are flooded with political, religious, miscellaneous, and other papers of almost every description. Why should this be so while every body admits their utility, and while it is an admitted fact that all men —particularly the politicians of all ages and of all countries, have been the friends and advocates of the farmers? Indeed one might be led to suppose that their peculiar champion—the politician—understood the business of agriculture much better than the farmers themselves. They are always ready to give them good advice.

Why is it that agricultural journals, above all others, are not to be found in the market places? It is simply, *because no one calls for them.* I have asked the newsboys a thousand times for an agricultural paper, and the answer has always been—"I do not keep them, for no one, or none but yourself, ever asks for them." Let ten or twenty men call for them every day, and they will be on hand as plenty as goose-yokes would be in a country store if all the customers demanded them.

I also received Mr. LUTHER H. TUCKER'S Oswego County Address, for which I am much obliged. And while acknowledging the receipt of those, allow me to answer a few of the erroneous teachings of one of your old correspondents, to be found on page 397 of the current volume of the COUNTRY GENTLEMAN.

Mr. LEVI BARTLETT, in speaking of Mr. THOMAS' recommendation to Cayuga County farmers, "to spread their manure for spring planting in the fall," says:

> "I believe Mr. Thomas is correct in his advice to Cayuga County farmers, and whatever course in this method of applying manure is profitable to the farmers of that county, will also be found equally so to the farmers of other Counties and States."

Strange teaching this to new beginners who are looking for correct information as to the most economical mode of using the great renovator of soils, to say that because the fall application is best in Cayuga County, where the surface soil is highly charged with lime and clay, resting on a tenacious subsoil within twelve or eighteen inches of the surface, which holds all the leachings as safely as would a stone crock, it will also be found equally so to the farmers of other Counties and States.

On all soils where manure does not waste, the earlier it is spread on the surface and incorporated into the soil, the more benefit is derived from it. Where the field is level, and contains an impervious subsoil, there can be no waste, if no more is applied than the soil requires. It is much better and safer to apply on sod than on plowed ground. Such tenacious soils, when once made rich, by good husbandry never grow any poorer. The benefit of fall manuring in Cayuga, holds equally good in the most of Seneca and Yates counties, and in considerable portions of Ontario, Livingston, Genesee, Niagara, Orleans and Erie. While most of the land in Cayuga would be benefitted by this system, I am not by any means certain that all the land in that county should be treated to a fall dressing; for if I remember correctly, when traveling there some forty years since, the timber on portions of the Owasco flats, and the old Indian fields on Salmon creek, as well as some other localities, give unmistakable evidence of a deep, porous soil, which no observing, practical and experienced farmer would think of manuring in the fall for spring crops. I am satisfied that deep, coarse, porous soils, will in no country retain manure more than three or four years. Indeed, the manure is of but little benefit on such soils after the second year, and is principally exhausted the first. Therefore on all soils of this character, the manure should be put on with the growing crop, as the loss would generally be one-fourth, and in some instances one half, by applying it the fall before. There are thousands of acres of land which have been exhausted by cultivation, and thrown out to the commons; and as cities and villages grow up in their neighborhood, and produce is increased in value, they have been reclaimed by lime and manure, and have yielded excellent crops for a year or two. But it has soon been found that, not having a bottom to retain it in the surface soil, through which it leached with about as much facility as through a sieve, they were a source of more expense than profit, and so they have again been abandoned to their natural products—five finger and poverty-grass. And this too between the two great commercial emporiums of the United States, New York and Philadelphia.

Much of the land on Long Island, which is so valuable near the city, would not be worth a straw in Cayuga county for farming purposes; and yet, where it is, they can afford to purchase manure and leached ashes by the bushel, and carry them on their shoulders to spread both fall and spring; and they can make more money by gardening in this manner than the farmers of Seneca, Yates and Livingston counties do on their naturally fertile and enduring soils.

And what do these facts teach? Simply this: know well your soil wherever it is; cease quarreling with the Almighty, and use the land for the purposes for which He made it. You will then cease to reverence the teachings of Liebig, or follow in the wake of Way, and fall back on your own resources, and try to master the unerring truths of Nature.

Mr. Bartlett tells us there is a great saving by drawing and spreading in the fall, as the expense of piling in large heaps and reloading in the spring is no trifling job. Nothing truer. But wherefore the necessity of drawing in the fall, and reloading in the spring? Does manure, like wine, improve by long keeping? Are the farmers of the country so rich, or their farms so profitable that they can afford to lay out of their interest for a year, as they must do if they hold their manure over till fall for next spring's use? Take your manure the same spring after it is made, and draw it out on any land where it should be drawn in spring, or can be without injury to the soil, and I will engage that it will pay more than ten per cent the first year, at any reasonable value you choose to put upon it. Do you not believe that eight loads to the acre, well spread on a thin meadow, would increase the quantity of hay from one-fourth to one-half of a ton per acre? And it will do still more good if spread on a newly sowed crop seeded with grass. If the land is thin, the crop of oats or any other spring crop, will be increased from 10 to 25 per cent.; and besides, the grass-seed will be sure to take, and the hay will be increased at least as much more the next season.

The many unerring proofs which exhibit themselves to the observing, thoughtful, practical farmer in the various kinds of soil, show the proper time for applying manures in different countries, and not unfrequently that a different mode of treatment is required on the same farm, the reasons for which are quite too numerous to explain in such a paper. Let one or two suffice on this occasion, that new beginners may not mistake.

On all tenacious soils, no matter what their composition may be, never apply manure when the ground is wet. Nothing can be more injurious to such soils than driving over and trampling them down while in such a condition. It crushes the life out of the soil, and packs it solid, so that it bakes and chunks up when plowed; and therefore it is sometimes necessary to manure such soils in the fall,

especially where the spring season is so short and wet that there is not sufficient time to draw out and spread the manure in time for planting.

On the other hand, some of the coarse, gravelly or shale soils, or even the barren sands of Cape Cod, of which Mr. B. speaks, are improved by driving over and trampling them when wet. I have but little doubt that those barren sands could be made productive by herding cattle on them a sufficient length of time in wet weather. The principal question to determine in that case would be, whether it would not cost more than it would come to. Much of the prairie land of the West, which he thinks would have been as barren as those of Cape Cod, if Liebig's theory was not correct (which I will endeavor to show the fallacy of in another communication,) is improved by herding cattle on it, as the traveller, if an observing one, will discover by seeing here and there a most beautiful green spot covered thickly over with luxuriant white clover and blue-grass, which are not to be found anywhere else on the prairie. If he will take the trouble to inquire, he will find that some herdsman has in by-gone times yarded his cattle there; and if a practical farmer he will soon take the hint that its fertility is not altogether chargeable to the manure which has been left there, but partly to trampling down of the light soil, which has given it greater compactness and tenacity than the surrounding soil, and which in fact has changed its character, and made it congenial to other plants.

On the other hand, the same treatment on a stiff tenacious soil, would drive out the very same plants, and bring in a different kind, the worthless May-weed for instance, that is seen growing on the road-side.

Again, take two pieces on the same farm, and on the same stiff adhesive soil as near as can be—sow a crop of field turnips, or almost any other crop on one of them on the same day in the morning when dry, and put on a flock of sheep large enough to trample it thoroughly, and it will improve the crop. Treat the other piece in precisely the same manner until the crop is in; then let a shower of rain come on it sufficient to saturate the soil, and then turn the sheep on and trample it down in the same way, and the crop is spoiled. On the other hand, if the soil should be very light and porous, the latter piece would be improved. Therefore the casual observer, by studying the simplest laws of nature, can determine where it is best to apply manure in the fall, and where in the spring, with the same certainty that he can tell which he should set under his water-spout, his basket or his barrel.

A. B. DICKINSON.

[For the Country Gentleman and Cultivator.]

CHANGE OF SEED.

I see the subject of changing seed has been discussed in the Farmers' Clubs this winter, and it is not my intention to say that a judicious change of seed is not sometimes necessary, but merely to state a few facts in regard to my own experience. I have cultivated the white Meshanoc potato for thirty-four years on the same farm, without any visible deterioration either in quantity or quality. Our early patch in the garden has been raised on the same plot of ground without changing for thirty years, and never has failed to produce a good crop in all that time. The ground was rich when I commenced, and has been manured every spring since with stable manure.

I have one kind of corn that we have raised for thirty successive years, and I would not exchange it for any other corn that I know of; but I would state that it requires the greatest care to prevent corn from deteriorating. It must be planted apart from other varieties; and more than that, you must select your seed from corn that has been raised on rich land, for it is just like cattle; it will degenerate if not well fed. We have not confined ourselves to the one kind of potatoes and corn. We have tried various kinds, but consider it more trouble than profit to keep them distinct, although we are not of that number that believe that potatoes will hybridize by using the tubers for seed; still it is difficult to keep a number of kinds apart, which always ought to be done.

I have quite a different experience to relate in regard to our cultivation of wheat. I have had to change seed every few years. We have found what we call the finer kinds of white wheat, more apt to degenerate. By sowing three or four years, it will scarcely pass as white. We have to get a new start from the north. I think we are too far south to raise wheat to perfection—latitude, 38 north. Although the State of Kentucky is famed for producing fine crops of white wheat, I think it must be owing to the soil more than the climate, and should like to hear from some of the farmers there how they manage to keep it of a fair color. S. J. *Gallipolis, O.*

[For the Country Gentleman and Cultivator.]

THE COST OF RAISING CORN.

We had always been surprised that western farmers could raise corn at a profit at prices varying at from 15 to 30 cents per bushel; but the past year we kept an accurate account of the cost of our corn crop, and can easily believe that on the fertile and easily cultivated lands of the west, where horse power can be used instead of the hoe, corn can be profitably raised at the above prices.

Our cornfield consisted of three acres. It had been mowed for three years previous—was strong, and required two yoke of oxen and two men to break it.

To 4 day's work plowing	$10.00
2 day's drawing manure with two men and team	6.75
Spreading manure	75
Harrowing	3.00
Chaining both ways	50
Three day's planting	2.25
Three pecks seed corn	75
Interest on land at $30	6.30
Three hundred pounds of plaster	90
Plastering	62
Cultivating both ways three times	3.75
Twelve day's work hoeing three times	9.00
Four day's work cutting	3.00
Husking and drawing in corn and fodder	10.00
Sixty loads manure at half price on account of future benefit	7.50
Total cost	$65.07
Corn fodder	15.00
	$50.07

Three hundred and seventy bushels of ears at a cost of 27 cents per bushel shelled corn—showing that corn can be profitably produced even in this *stony* country.

St. Lawrence Co., N. Y. ST. LAWRENCE.

[For the Country Gentleman and Cultivator.]

MATCHING WORKING CATTLE.

Messrs. Editors—Observation has led me to the conclusion that in matching working cattle the following are requisites, viz.: They should be of one age, of equal size, of the same color, space between the eyes of equal width, length of hair, and also quality of hair as to coarse or fineness, size of bone, thickness of skin, &c., &c., all of which should be as nearly as possible the same. Then, if well broke, my word for it, you will have a good pair of cattle.

For the consideration of those who may doubt the above statements, we will call their attention to the following facts: Why is one animal white, another black, this one red, that one spotted, one long-haired, another short-haired, &c.? Why this difference? Men may not agree as to the cause of cattle varying so much in their appearance; but nevertheless the cause is a true one. And as a general rule when causes are alike, their effects will be alike. Why are twin calves more likely to make an even pair of cattle than calves that are of no kin to each other? They are more likely to be fashioned alike in every respect. Hence their evenness. Like causes like effects. Two animals of no more kin to each other than men of the present day are to Adam, if fashioned alike in every respect, will be as near alike in their dispositions as a pair of twins, and in one sense of the word would be twins. The same rule will apply to horses and other animals, mankind not excepted. G. P. Serviss.

[For the Country Gentleman and Cultivator.]

How to Improve a Badly Run Farm.

Messrs. Editors—Having in a former article advised those with limited means, to buy farms that were more or less run down, and stated that they would have to adopt some course of improvement, by which the land may be brought up and made productive, I will now proceed to point out the course that it will be best for them to pursue.

The first and most important point to be considered and attended too, is a general change of crops. Most farms that are run down, have been under a long course of cropping with one or more of the different small grains, such as wheat, rye, barley or oats—one of these grains generally being made a leading crop; in wheat sections, it is wheat, in other sections oats. And although rye and barley are raised to some extent, yet a large portion of badly run land has been mainly cropped with wheat or oats; while these crops are calculated to have as bad effect on land, and to give it a poor worn-out appearance as quick as perhaps any other crops; though in reality it may not be so very badly run down for other crops, besides wheat and oats. Again, such land is generally not plowed more than four or five inches deep, consequently, though the land may sooner appear to be worn out, yet in reality it is only badly run to that depth. Hence a change of crops, and deep and thorough cultivation, may be expected to produce excellent results.

This may be illustrated by relating a little of my own experience. (And here let me say, I do not intend to state or recommend anything in these remarks, that I do not consider warranted by my own experience or observation.) I commenced farming on a small place that had been let to neighboring farmers,—no one residing on the place for many years, before it came into my hands. As is often the case, all that was raised was taken off from, and nothing returned to the land. It had not been seeded down for a long time until the spring before I bought it, it was seeded to clover. Wheat had been the principal crop, alternating occasionally with oats—the last crop, which was oats, only yielding some twelve or thirteen bushels per acre. It was so badly run out, that it was difficult to get any one to take it. The spring it came into my possession, I planted six acres to corn and potatoes, the corn yielding at the rate of fifty bushels of shelled corn to the acre, and the potatoes at the rate of 160 bushels per acre. These crops were raised without any manure, except the clover sod of the previous spring's seeding, and were undoubtedly due to a change of crops, deep plowing, and good cultivation. Nor was this all; by making a general change of crops and management, the land was not only made productive and profitable, but the general appearance and credit of the place was brought up and improved so much, that when I wished to sell and buy a larger farm, it sold for about double what it cost me. I have also pursued a similar course or change of crops on my present farm,—which was considerably run down—with very satisfactory results.

There are many similar instances of the great benefit of a change of crops, that have come under my notice, but I can make room for only one or two. One is in regard to a piece of rather poor hemlock land, that, as it was not considered very good wheat land, had been kept in spring crops some years, and as the owner said, "wanted seeding down." He said he "did not expect much wheat, as it was not wheat land, and had been a going in spring crops some time and wanted rest; but that in order to get it in a good condition for meadow, and well seeded, he was going to summer fallow and sow it to wheat." Yet that field gave 30 bushels per acre, which was an extra crop for that kind of land. In another instance, the same kind of land that had been badly run to spring crops, was sown to wheat on oat stubble, and gave over 20 bushels per acre.

Having shown that a change of crops produces good results, we would continue to make use of this fact, as far as circumstances will admit, by adopting a systematic change or rotation of crops. There are many good and sufficient reasons besides those already given, in favor of a rotation; but the readers of the Co. Gent. being familiar with them, I shall proceed to consider what crops should be included in a rotation for a badly run out farm.

Perhaps the best way to determine this question, will be to consider what crops have been grown to impoverish the land. But this has already been done to some extent, in considering the necessity of a change of crops. Hence, having seen that the small grains have been the principal crops raised in running down the land, it will be best to raise as little as possible of them, and find some other crops to take their place.

Now there is one crop that I have seldom, if ever, heard charged with wearing out, or even injuring land. True, we sometimes hear of land becoming "clover sick" in England. But I believe such cases are exceedingly rare, if there are any at all, in this country, and more especially when plaster is sown on the clover, as it always should be on all but very rich lands. But on the contrary, while clover never impoverishes land, it is seldom raised without improving the soil and putting it in a much better state for other crops; and this improvement being much greater and more surprising on badly run land that has been but seldom, if ever, clovered. Again, clover can be made a very profitable crop, as I hope to show when writing more in detail in regard to its cultivation. Now for these reasons, and many more, some of which may be given another time, clover should be the leading crop in bringing up land.

Next to clover I consider corn the best crop to grow in improving the soil. The reason for this opinion can be easily made apparent to all, in this way. Who ever heard of land being run down where clover and corn were the principal crops; and these crops, made good by thorough and deep cultivation and manuring, were mostly consumed on the farm, as, of course, they should be? Such cases must be exceedingly rare, if indeed there are any. For my part, I have yet to meet with the first one. True, run down land will not continue to produce as good crops for any considerable length of time after a change as it does at first. Yet by raising clover and corn for the principal crops, and feeding a large portion of both on the farm, the land may be constantly improving, and the crops after the first and principal effect of a change is worn off, be continually growing better. It is true that corn grown year after year on the same field for a long time will on most soils run down the land. But when it is grown only once in four or five years, in a judicious rotation, and everything in relation to the crop well managed, the general effect and result will be altogether different.

But, though corn and clover should be the principal crops, yet there should be some kind of grain sown after corn to seed down with. What this should be may perhaps be best determined in each particular section, regard being had not only to what would be likely to succeed best, but also to the kind of grain that clover will take the best with, it being always important to get a good seeding.

In considering the best way to improve a badly run farm, I have not alluded to underdraining, for the reason that a man commencing on such a farm, more or less in debt, will have but little means or inclination to do anything of the kind, but will rather choose to buy a farm that may be improved without it. Still there may be instances where it will best to buy land that needs underdraining. In such cases due allowance should be made for it in purchasing, and sufficient money retained to pay at least some portion of the expense.

As good and deep cultivation and manuring, which should include a liberal use of plaster and ashes, have been frequently alluded to, it will not be necessary in concluding, to do more than merely state that while they are very important on all farms, no one need ever think to succeed for any length of time on badly worn land without giving both the strictest attention. And that, as a general change

in the course of cropping and manner of cultivation will give good crops on the start; so these crops should be so managed and used as to give the largest amount of manure that it may be practical to make, thus making good crops add largely to the amount of manure, which in turn will add to the amount of crops, and this course followed up, will be sure, sooner or later, to make a good productive farm. F. *Orleans Co., N. Y.*

[For the Country Gentleman and Cultivator.]

HOW TO DESTROY RED ANTS.

Messrs Editors—J. H. F. inquires how to destroy "those ants." I conclude from his description of them, they are what are called the red ant. I would say to him, and to all others who are troubled with those little torments, that thousands of them can be destroyed a day by putting walnut meats on pieces of paper and placing them in their trails. When a goodly number have gathered on the meats (of which they are very fond,) carry them on the paper and burn them. This can be repeated several times a day. My house was literally over-run with these little pests a few years since, but by perseverence, my wife destroyed them so effectually, that we have not seen one of the little intruders for the last two years. L. *South Hadley.*

We have no doubt but that the method above recommended will prove entirely successful; but if our correspondent cannot procure walnut meats, a piece of fresh meat, or any thing which will draw the ants to it, will answer the same purpose. The only requisite is that the remedy be continued so long as any of the ants appear. The bait should be placed where the ants are most numerous, and it will hasten their destruction by placing it in different apartments where they congregate largely.

HOW TO MAKE STRAW HIVES.

In the Country Gentleman of Jan. 16, p. 50, we published an article from a correspondent of the Dollar Newspaper on the advantages of straw hives. The writer, in conclusion, promised to furnish a few plain directions for making straw hives, which he had seen in use the past year. These directions are as follows:

I do not claim that my plan for a straw hive adapted to improved bee-keeping, is the best that can be devised. I do not say that it is the best that has been given to the public, but since it is cheap, simple, and free from the suspicious prefix of *patent*, [Would it not be claimed under the Langstroth patent on account of the movable frames?] it is the more confidently submitted for what it is worth.

Take strips of pine or other soft wood, an inch thick by two inches wide, and make two rectangular frames, halving the corners together and keeping the wider surfaces in the same plane. These frames must be of the same size, and of dimensions according to the size of the hive required. Lay one of them on the bench before you and nail to it upright strips of lath of length corresponding to the height of the hive, the lower ends being even with the lower surface of the frame as it lies. These uprights must be nailed on both inside and outside, and about four inches apart. Now take long clean straw, previously wet, and lay it between the upright pieces of lath, bending it round the corners in such a way as to make the walls of the hive. Having pressed the space full, lay the second frame upon the straw directly over the first, nail the upper ends of the lath to it, and the hive, with the exception of the top, is done. Such a hive should have two tops, movable, of course, as in all movable-comb hives; one of wood an inch thick, to be used during the gathering of surplus honey, and the other of straw for spring, fall, and winter. This straw top may be made on the same principle as the hive. Make a frame of proper size, and two inches deep; nail pieces of lath on the under side, sinking them in so as to leave a level surface; fill in above them with straw and bind it down with lath nailed above, crosswise, from side to side. It will be unnecessary to leave any passages for ventilation, and as the thin wood top is to be used in the honey season, no holes are necessary in the straw top to communicate between the boxes and the hive. Such hives, with no ventilation but that afforded by the porous absorptive mass of straw on the sides and the top, were found free from frost on the combs and in fine condition where the thermometer stood at 10 degrees below zero, Fahrenheit.

It will be seen at once that this hive is adapted to the movable combs, the fixtures of glass boxes and wooden covers, and all the appliances of improved bee-keeping, quite as well as those made of wood.

It may be objected that the bees will very soon coat the inner surface of such a hive with an impervious coating of propolis, thus preventing the absorption of moisture. Granting both this to be true and that it could not be easily remedied, the advantage of an even temperature would remain. But if the inside of the hive should chance to be coated as thoroughly as supposed, the frames being movable could easily be taken out and the propolis taken off the straw by scraping, scratching or scalding with hot water. And even if this could not be done, since winter is the time when the hive should be most nearly closed to retain the animal heat, the straw top would then be used, which would, probably, of itself, afford sufficient ventilation.

[For the Country Gentleman and Cultivator.]

THE HONEY BEE.

Inexperienced bee-keepers will be interested to know that many swarms are destroyed, and many others greatly injured, by neglecting timely to remove from the bottom board of the hive, the cappings of their winter stores and young brood, and the bees which die in winter—which, together with the moisture from the condensed vapor in the hive, as it settles into this mass, forms a compound too well adapted to mold the comb with which it comes in contact, or close the door and suffocate the bees. It is true the combs become mouldy in many hives which have not been thus neglected, but this is a very common cause, and easily prevented. Combs which are but slightly mouldy are not materially injured.

It is a mystery to many bee-keepers even, why many swarms continue year after year, without producing either surplus honey, or a sufficient number of bees to swarm. Some, however, attribute such unproductiveness to a superabundance of drone comb, or of bee-bread (pollen) in the brood combs. But I am satisfied that it should as often be attributed to mouldy combs destroying to greater or less extent brood combs. And as bees, in common with other insects, are short lived, one limited generation of bees might follow another for an indefinite period, without profit or better prospect.

The best course to pursue with such swarms, that I know of, is to transfer them with such portions of comb as is suitable, and that worker brood comb only, to a new hive in early spring, or drive them in swarming time.

The first bee food in spring of much importance (here,) is obtained from the flowers of the soft maple. Often, as early in spring as the weather is sufficiently warm that bees can fly to the woods, this food is supplied in abundance. But as this food, (pollen) is principally for the young brood, (though not less important,) such swarms as are short of honey will still need to be fed. I. I. *East Shelby, N. Y.*

[For the Country Gentleman and Cultivator.]

MADAGASCAR RABBITS.

These beautiful pets, sometimes called Lop-Eared Rabbits, do not receive the attention their good qualities entitle them to. They are much the largest and the most beautiful of all the rabbit family. Their flesh is far superior to that of the wild rabbit, and better than the flesh of the common domestic rabbit. I think they should be bred extensively by the poor class as an article of food, for they can be easily raised at a trifling expense, requiring to be fed only on coarse and cheap food. They occupy but little space, breed often, and come early to maturity, when full grown frequently weighing from fifteen to twenty pounds. Their skins, when tanned, make beautiful robes, their colors being handsomely variegated. As fine a rabbit may be raised in a dry goods box, placed in some shed or corner of the yard, as those raised in a warren costing fifty or one hundred dollars. I would in no way discourage the raising of these rabbits as a matter of fancy, for the breeding of them is a pleasant and instructive amusement for children, and to follow the rabbit through all the different periods of life, from the time it is deposited in its downy nest until it arrives at maturity, is one of the most pleasant observations of the Naturalist. S. P. Keator

MANAGEMENT OF THE BLACKBERRY.

At the late meeting of the Illinois Hort. Society, C. Merritt of Battle Creek, Mich., said he had been very successful with the New Rochelle—had an acre of the plants, but they needed winter protection. This he accomplished by first cutting out the bearing shoots, when with the help of two men with spades he laid down the whole in a day. The earth is loosened with a rake on the side towards which they are to be laid down, when they are pushed over with the rake, and the two men throw on earth, and a little rough litter is added. They are planted six feet apart, and cultivated each way. They are staked in spring. "Before laying down in autumn," says the owner, "I cut off the main stalk nearly down to where it bends over, and the side branches to fifteen or eighteen inches. Where there is no snow, I would cover the stalk. Last spring when I got ready to plow, I found I had only about half enough canes on the acre. I manured in June with a wheel-barrow load to every two hills. They were a "sight" when they blossomed. The crop was estimated at from 100 to 150 bushels, and I am confident was not less than 100. I picked 60 bushels, and sent them to this market; brought $4.50 to $5 per bushel. Four stalks in a hill are enough. I sell the sprouts or cut them down. I think from 120 to 150 bushels can be raised on an acre. Some of the ground I mulched with cut cornstalks, which was an improvement. My soil is a gravelly sand with loam, sub-soil gravelly and open, but not leachy. The berries were uniform in size, except in the last of the season."

Novices should understand that summer pruning is in most instances essential to success, that is, pinching off the leading stem when 3½ or 4 ft. high, to induce the growth of side branches, which also must be pinched off, if they extend far—the object being to produce that short stubby growth which best favors fruitfulness. Boys who pick wild blackberries at the east, have often observed that such bushes as the cows have browsed partly down, are loaded with berries; and this summer pruning is on the same principle, although in not quite so rough a style.

NEATNESS IN THE FLOWER GARDEN.

The principal characteristic of the flower garden should be neatness. No matter how much may be expended on new and beautiful plants or how great the number of flowers, yet if neatness be neglected, the effect of the whole is spoiled in the eyes of all persons who have been accustomed to see well kept gardens. A beautiful flowering plant may have all its loveliness destroyed by the remains of dead flowers or decaying leaves, or a fine specimen may be devoid of attraction for want of a little care and attention in tying up or training. The lawn may be robbed of its beauty by allowing the grass to remain uncut until it more resembles a luxuriant meadow than an ornamental portion of the flower garden, whose chief beauty consists in a smooth, closely shaven sward with a velvet like surface. So too, rambling, straggling shrubs, climbers with no provision of strings or trellis, walks filled with weeds, borders foul with grass and noxious plants, are all unsightly to a person with a true perception of the proper keeping of the garden.

The walks should be always kept free from weeds, and neatly raked. If grass edgings are used, they should be kept neatly pared.

The borders should be frequently hoed and raked, not only to destroy weeds, but also to break up the surface, which soon becomes baked and hard under the joint influence of sun and rain.

All tall growing plants, or those with tall flower stems, should be tied to neat painted sticks, which should be prepared in large quantities of all sizes during seasons of leisure. Herbaceous plants of the large sorts should have their stems loosely tied together, or else heavy storms will beat and break down the outside stems.

All flowers and leaves which have begun to decay should be immediately removed, unless seeds are wanted, in which case only the dying petals of the flowers should be taken away.

Climbing plants should have trellises or strings to run upon the moment they begin their growth, and those sorts which will not run should be tacked to the wall or fence with neat strips of leather.

All annuals which have finished their bloom should be removed, and early flowering herbaceous plants may be cut down to the ground as soon as the flowers have faded, when they will probably make a second growth and bloom.

Straggling shoots in shrubs should be at once cut out.

Many more rules might be given for the proper care of the garden, but the above are sufficient. The vigilance of the cultivator will at once detect the want of neatness in any department of the garden, and will remedy it.

G. B. H.

[For the Country Gentleman and Cultivator.]

ONIONS vs. MAGGOTS.

Mr. Editor—In common with every farmer in this vicinity, I have suffered severely in the cultivation of onions, from the ravages made by maggots. I made several experiments which were attended with little or no success, until I hit upon the following expedient:

I took about two quarts of tar, put it in a kettle, and poured six or eight quarts of boiling water into it; let it stand till cold, then took a common watering pot, stopping up all the holes in the filterer save one, and filled it with this tar water; when the onions came up, I applied it, running a small stream of the water along on each row. I continued its application throughout the season, and the result was I did not lose an onion.

Last season, having much other business to attend to, I neglected to apply it but two or three times, and I lost probably one twentieth of the crop. I am confident that this is a sure preventive, and would recommend every farmer to try it. It is simple, and does not retard the growth of the onion. Levi Remick.

Kittery, York Co., Maine.

[For the Country Gentleman and Cultivator.]

NUTTING'S ROOT CUTTER.

Messrs. L. Tucker & Son—On page 107, Feb. 13, 1862, "Country Gent.," is a communication from R. Nutting, relative to his "New Root Cutter." On reading the article I enclosed the price to D. Odiorne, Randolph, Vt. The Cutter was forwarded—I was disappointed, and on receiving it at the R. R. Depot, would have sold out at less than cost, but being no purchasers there, I took it home—tried it, and changed my mind. I would not sell it for four times its cost if I could not procure another of the same kind.

It cuts very fast—cuts in curved pieces which are left in a broken condition, so that no animal could choke with them; but does not cut quite so thin as Mr. Nutting says it will—which I presume is accounted for by the fact, as they wrote me, that my cutter is not so good as the average, being the last one on hand at the time.

Fair Haven, Ct. W. J. MORRIS.

[For the Country Gentleman and Cultivator.]

TRIMMING THE GRAPE.

Use of Shellac Varnish for Vegetable Wounds.

1. *The Time.*—*a.* This necessarily is done mostly in autumn as a necessary preparation to laying down the wood. But I prefer at that time to leave more numerous and longer branches than I intend to have grow the next spring. This is done to guard against accidents and the unusual pressure of severe winters, especially when they follow a summer of imperfect growth, such as that of 1859 and 1860—*b.* In the spring after the wound is laid open to the sun, an experienced eye, especially with the aid of the knife, will readily ascertain the condition of the wood and buds, and guide in the additional thinning and shortening of the wood—*c.* In the use of shellac varnish one may trim just before the buds open, and indeed later, provided it be done in a cool morning, with rapid movement. Shellac gum being soluble in alcohol, but not in water, the varnish dries almost instantly when applied to the cut surface of the grape or other fruit tree. The close adhesion of the varnish filling the very pores of the wood, and its subsequent insolubility causes a perfect closure of the pores of the wood.

2. *Mode of Making Shellac Varnish.*—*a.* Take a broad-mouthed viol from the size of two or three ounce to a pint. Fill it two-thirds full with strong alcohol, and put in shellac gum until, after solution, it is like very thick paint; cork it tightly to prevent the evaporation of the alcohol, putting in more of the latter whenever it becomes too thick to spread freely—*b.* It may be readily applied with the end of the finger or a small stick. It is best, however, to use a small painter's brush, one whose brush is as broad as a large thimble—*c.* On ceasing to use this brush, wipe it as clean as you can conveniently, and then let it dry without keeping it in the bottle. When you wish to use it again you have but to pound it gently when it will soften readily without the necessity of using alcohol to clean it, the shellac varnish being much more brittle than that made from other gums for the use of furniture—*d.* On using this varnish in cases where you fear bleeding, it is necessary to act with speed, applying the varnish almost instantly after the limb is cut. If this is not done, and the sap begins to flow, draw the dry palm of your hand, in a dry cloth, over the cut, to remove the moisture, and then apply the varnish.

3. Considering the cheapness and manifold uses of this varnish, every householder who has even a few shrubs and fruit trees to trim, should keep it ready prepared, as with the aid of it he may trim almost every tree at any season during the summer. These facts are familiar to most cultivators of grapes, and they are repeated here for the benefit of the inexperienced.

Paint for Marking Labels.

1. In the business of the garden and orchard marked stakes and labels are often needed for temporary purposes, as the designation of rows of fruit trees, new varieties of corn and potatoes, flowers, &c., or rows of seeds sown in hot-beds.

2. The staves of an old barrel sawed in two and sharpened at one end answer for larger purposes, and short pieces of hemlock lath, planed smooth on one side, for smaller ones. Those who happen to have blocks of cedar cut off from long posts, or even the sound portion of cedar posts that have failed, will find them especially useful wood for splitting up for either large or small marks and stakes.

3. For paint to mark such stakes and labels I have found nothing so cheap and ready as shellac varnish, into which a little lampblack had been well worked. Whether used in making letters or figures it should be applied with a small brush. It is better applied to the naked wood than to a painted surface, to which, especially if the paint be fresh and glossy, it does not adhere well.

Such paint will continue legible until the stakes decay. Its superiority to oil paint is seen in two facts—it dries rapidly, and it does not spread on the wood when first applied, as does oil paint on many surfaces, and become illegible.

So also this same mixture is superior for the same reasons for marking barrels, boxes and bales of goods.

Utica, N. Y., March 27, 1862. C. E. GOODRICH.

[For the Country Gentleman and Cultivator.]

PLACING TILE DRAIN.

Eds. Co. Gent.—I observe an article on "laying drain-tiles," from the pen of Mr. Fish, in your issue of Feb. 27th last, in which he recommends the use of wooden bearings to keep the joints in place, instead of collars.

As cheaper and better than the plan recommended, I suggest the following: Take a piece of tough hickory or oak wood, four or five feet long, of the size of the tile to be laid, and dress it into a triangular or prismatic shape. After the bottom of the ditch is properly prepared, lay the triangular stick above described where the tile is to be placed, and standing upon it, with the pounder sink it into the clay, so as to form a bed for the tile. After the first impression is thus made, the stick, moved forward half its length at a time, will be kept in place while the forward end is pounded down. In this manner a groove of compact bed can be formed readily and cheaply, which will permanently hold the tiles in place. Jno. Evans.

Evanston, Ill., March 16, 1862.

[For the Country Gentleman and Cultivator.]

IRRIGATION AND WIND-MILLS.

Friend Tucker—Having just read a communication in The Cultivator on irrigation, a thought struck me that I might benefit the species homo by a suggestion. As not many farms contain a spring or pond sufficiently elevated for irrigation of extensive acres, a well on the height of land, with a wind-mill to raise the water, would overcome every objection; which can be built for $25, and that will tend itself. A small reservoir would never get empty, or if the well was dug in a low wet place that needed draining, and the water sent by a lead pipe to the high ground, it would serve a double purpose.

While on this subject, the wind-mill may be made to pay double interest by sawing wood, for which it is well adapted; and if at the house or barn, may be used for various other purposes, such as washing, churning, and cutting straw or fodder, thrashing and grinding coarse grain, and if the owner is half mechanic, he can busy himself in sawing shingles for repairs about the premises. Finally, I will back my suggestions by offering to build a wind-mill on any barn within a reasonable distance from home, for one hundred dollars, that I will warrant capable of doing all the thrashing, cutting feed, sawing wood, and grinding both meal and axes, for any farm in this State; and further, (if in this county,) will guarantee wind sufficient for all purposes if improved. Alvah Walker.

Oswego, N. Y.

[For the Country Gentleman and Cultivator.]

SULPHUR FOR LICE ON STOCK.

I have seen and tried numerous remedies to rid stock of vermin, but never succeeded so well as with sulphur on a lot of calves last spring, by giving it in their feed. I tried it before, but it did not seem to do the work, and am now satisfied it needs to be continued for some length of time in order to get well incorporated into the blood of the animal, and then I am of opinion that they will decamp without further notice. I know that oil or grease will destroy them, but think it requires a direct application to effect the object. A. Moss. *Boone Co., Ill.*

[For the Country Gentleman and Cultivator.]

RAISING LAMBS FOR BUTCHERS.

First, in the selection of ewes, I know of no better class of sheep for the system of this section of country, than good York State ewes; perhaps in a drove of 1,000, from 200 to 500 of the proper grade might be selected. I should pick for a sheep of a particular wool, as all our best farmers have proved that a long open wool does not do; nor yet (although better) the little nasty Merino. The former produces a lamb too coarse, not fattening well, and the ewe is too long in getting fit for market; the latter has a lamb that fattens well, but neither produces enough wool or mutton herself to be profitable. In five minutes, with the sheep before us, the best could be pointed out, and better understood than a page of writing will explain. A close compact fleece about the grade for fineness, of half Merino, is our choice. Next, I should select broad, heavy set, short-legged ewes, (as they are not to travel much more,) without horns, about four years old; the bag examined, that both teats shall be good; in condition just fairish, as, if too fat, it may argue she has been a poor milker. The time of year for procuring the ewes, should be August or forepart of September.

Now a very important matter comes up, on which depends one-third the profit of the lamb crop, viz., are you buying of a drover that you can depend on his word, and when you ask him if any ram has run with these ewes, does he answer no? I have found no exception to the rule, that all ewes, in lamb when bought, produce inferior lambs, and the butcher rejects all such until the last, if he will have have them at all. They are perhaps got by a common ram, and he without being in a proper condition for service; and the ewes after being served, instead as they should be, improving in condition slowly but surely, have been from driving, running down very fast. Being sure you are all right so far, turn your selected ewes on short pasture for at least two weeks.

But I have forgotten another very important point, viz., buy only so many ewes as you are prepared fully to keep well; not only for the fall when buying, (your plentiful fall pasture may tempt you,) but through the winter, and especially through the spring. Between hay and grass is a hard time for sheep; but this leads me to root-raising, which must be now passed over.

As worth more than all the dictatorial pages I might find time to write, to the lamb-raiser, I will here give some actual experience. About 1840 to 1845, being tempted to buy more sheep than I had keeping for, in the fall I procured 25 ewes, (having a few on hand before.) All went well until, towards spring, the ewes began to lamb, but from scarceness of good clover hay, many of them had not milk enough to keep their lambs alive; this, combined with want of warm shelter for the young lambs, caused a great loss in the number of lambs raised, so that I only raised thirteen lambs from the twenty-five ewes, and the thirteen so stunted, that in June I could only get $1.50 per head, clear of freight, for them; and the ewes were worth no more in the fall than one year before, when bought. I wonder if there are any sheep raised on the same principle in the States of New-York, Ohio, and so on West. I think so from their appearance.

Now the above was one of the most profitable deals I ever made in the sheep line—"bought wit is the cheapest." I soon began to keep a small flock. I think it was in 1846, I kept only 8 ewes, and sold more dollars worth of produce than from the 25. In 1847 I wintered 4 ewes, and not only made more profit than with the 25, but sold more dollars worth from the 4 than from the 25, besides the greater expense of keeping 25. From my sheep-book I will here give a few particulars of the six lambs raised from the 4 ewes:

1st, dropped Feb. 4; weighed March 3, 23 lbs.—June 2, when sold, 82 lbs.; single. 2d, dropped Feb. 20; weighed March 3, 8½ lbs.—June 14, 76½ lbs.; twin. 3d, dropped Feb. 20; weighed March 3, 9½ lbs.—June 14, 81 lbs.; twin. 4th, dropped Feb. 23; weighed March 17, 14½ lbs.—June, not weighed; twin. 5th, dropped Feb. 23; weighed March 17, 14¾ lbs.—June 14, 83 lbs.; twin. 6th, dropped Feb. 26; weighed March 3, 13 lbs.—June 14, 79 lbs.; single.

Note.—1st, all began to eat meal at three weeks old; some, a little at two weeks. 2d, sheep fed some turnips and two quarts corn-meal twice per day. 3d, got out of turnips; run on winter grain—did not do so well. 4th, gained from April 1st to 8th, 21¾ lbs. (the six,) in one week. 5th, took off grain—fed small potatoes, with little meal; gained from April 8th to 15th, one week, 24½ lbs.—over 4 lbs. apiece. 6th, one youngest twin gained more than single lamb from April 22 to May 24. The lambs were sold at $3.50 apiece—a large price that season.

I would correct here a mistake in your article, Messrs. Editors, about the weight of lambs; it should read, live-weight not dressed, as a young lamb very fat early in the season, weighing 50 or 55 lbs. alive, will dress 8 lbs. per quarter—which is good for early lamb.

I might give page after page of figures and experiments, but the above must suffice, except about one lamb fattened in 1851. He was one-half South-down; dropped Feb. 6th; weighed Feb. 23, 24¼ lbs.—March 2, 31 lbs.—March 11, 38½ lbs.—March 18, 44½ lbs.—March 29, 53 lbs.; when sold to Mr. Charles Kent, a New-York butcher, for $4.50—just 51 days old—which lamb was said to be, of its age, the best ever dressed in New-York market. My readers need not expect to beat it often; and it would be proper in this place to say that from 3 to 4 lbs. per week is a very good gain—I never was satisfied with less than 3½ lbs. per week, or a half pound per day, for fattening lambs; but lambs for breeding or stock sheep, is a different matter.

I have run so far off my intended track, that I must close for this letter without getting back.

Holmdel, N. J., April 8, 1862. J. C. TAYLOR.

[For the Country Gentleman and Cultivator.]

CORN AS FUEL IN THE WEST.

The abundance and extremely low price of corn have led many farmers at a long distance from coal or timber, to substitute corn as fuel for the kitchen and parlor fires. Corn cobs are excellent fuel—corn itself on the cob burns well, and gives a strong abundant heat. In many places in the West, corn cannot now be sold for ten cents per bushel. Wood and coal have to be drawn a long distance and the corn sold to pay for them. The corn is at hand—and in many places its consumption for fuel in the kitchen fire is economy.

We have heard many persons argue that it is wicked to use corn for such a purpose, and yet they would consume it in alcohol or as burning fluid without a scruple.

A bushel and half basket of corn will last in a moderate or not very severe day, about ten hours. In a severe day of cold and wind, from two to three bushels would be consumed.

We have travelled much in this country during the past winter, and seen very many fires of large ears of golden corn. To one "brought up" among the wooded hills of southern New-York, we must say this does not *look* right. Yet we argue that in corn-burning as in other business, *men* should consult their own interests.

Amboy, Lee Co., Ill., March, 1862. G. W. H.

UNRULY CATTLE.—An ox or cow that is accustomed to throwing fences, may be prevented doing so by taking a large wire and bending it in the shape of a bow; then bend the points in the shape of a fish-hook; tie two strings to the wire, place the hooks in the nostrils lightly, and tie one string to the point of each horn. This will prevent the most unruly ox or cow from throwing fences.

H. R. O.

THE CULTIVATOR.

ALBANY, N. Y., MAY, 1862.

☞ The New York State Fair is to be held Sept. 30—Oct. 3, probably at the city of Rochester.

☞ Hon. Jos. A. Wright, U. S. Senator from Indiana, sends us a report of the debate in the Senate, upon the House bill establishing "a Department of Agriculture."

This bill, as was remarked in the debate by Senator Simmons, advocating its passage, "simply detaches the agricultural portion of the business of the Patent Office from the Interior Department, and makes it an independent Department." It does not appear to add particularly to the scope or efficiency of the Agricultural operations of the government, but only christens the old machinery with a new name; and the best argument which Senator S. could find for it, was that it "is simply a compliment to the great leading interest of industry." He took pains to repeat subsequently that he considered the bill "merely a compliment," as though the politicians, while they can find no time to perform any real service for the Farmers, might at least touch their hats officially to them, now and then,—and closed by trusting that the Senate would "now give them this little boon, if for nothing else, merely to gratify their pride."

With all due thanks to Senator S. for the pains he has been at in the matter, we think there is very little "pride" involved on the part of the farmer. The trouble has been that the heavy expenditure purporting to be for his benefit, has not been well and judiciously applied. It has only been his hope that a department might be devised which should not adhere to the traditions, nor be subject to the mismanagement, which have characterized the former bureau—in a word, which should be worth to the country what it cost.

Senator Wright, who evidently perceives that merely a change of name is not a very substantial "compliment," at once proposed a substitute, much more nearly in accordance with the views heretofore expressed in this journal. He supported his proposition in an extended and forcible speech, laying especial stress, as we have done, upon the importance of making it a department for the collection of statistical information as to the condition growth, requisites and attainments of our Agriculture. Senator W.'s bill is really a step in advance; it contemplates a programme which, if well carried out, could not be otherwise than of incalculable benefit. While some might be disposed to suggest modifications in its subordinate details, the general intent of the whole is in the proper direction, and if a competent man can be found to occupy the post of Commissioner, his experience at the end of a year would enable him to report upon whatever amendments might prove necessary in order to secure the greatest efficiency of the force and money at his disposal.

We have not space at present to publish Senator W.'s bill, but shall watch its progress in Congress with great interest.

Iowa Sugar.—I enclose a small sample of sugar from the Chinese sugar cane of our own manufacture; we have a considerable that granulated from the crop of 1860, and also of 1861. I have made considerable syrup or molasses during the fall of the last three years, and think that I have learnt considerable by experience, and if I thought my little experience would be interesting to the readers of the Country Gentleman, I would give it to them. J. F. Gritman. *Linn Co., Iowa.* [This is one of the nicest samples, if not the *very best*, we have yet seen of Sorghum sugar. Our friend will confer a great favor by giving us the results of his experience, and the method of manufacture adopted, as fully as possible. Eds.]

☞ To Charles L. Flint, Esq., Secretary, we are indebted for copies of the Ninth Annual Report of the Massachusetts State Board of Agriculture for 1861. Issued with the customary promptness, its contents are of fully the usual degree of interest and value.

Sub-Committees of the Board were appointed to report upon different subjects now of especial interest in the Agriculture of the State, and the papers thus contributed form the leading feature in the volume. They include one upon the Diseases of Vegetation, by Dr. John C. Bartlett, upon Cattle Breeding and Feeding, by Dr. Geo. B. Loring, upon the Protection of Sheep, Lambs, &c., by R. S. Fay, Esq., upon the Wastes of the Farm, by Jas. S. Grennell, Esq., and upon Wheat Culture, by Mr. Levi Stockbridge. The other papers contained in the volume make up a useful variety; and we hope to refer hereafter, as time permits, to several of the number—especially to the tables of the Agricultural Statistics of the State, which appropriately occupy about 70 pages near the close of the volume.

☞ We have already mentioned the Trial of Reapers and Mowers to be held the coming season at Dixon, Illinois, by the Agricultural Society of that State. The exact time is to be announced by President Van Epps, who resides at Dixon, according to the condition of the crops. The following are the prizes and the regulations adopted:

For the best combined mower and reaper	Diploma and	$75
For the best reaper	do.	50
For the best mower	do.	50
For the best one-horse mower	do.	20
For the best heading machine	do.	50
For the best grain binder which can be readily attached to any ordinary reaper		Medal.

Headers to compete with headers, and not with other machines.

That an entry fee of fifty per cent. upon the cash premiums offered be required to be paid by each exhibitor.

That no award shall be made in any case unless two or more machines compete for the same.

That entries may be made with the Corresponding Secretary, at Springfield, until the 15th of June next.

That the machines competing be required to be on exhibition at the State Fair at Peoria, at which time and place the awards shall be publicly announced.

That the details of the requirements for the trials and scale of points be such as have been sanctioned by experience in similar trials in the United States, and that the Executive Committee of this Society be the awarding committee.

☞ The fact that Wheat will "winter-kill," while Chess will survive and flourish, is the source, we are fully convinced, of nearly all that we hear about so-called "Transmutation." A correspondent at North Madison, Ind., supplies an instance in point; in a letter just received he says: "When I last wrote I mentioned that my wheat was badly winter killed, but forgot to say that I sowed fourteen grains of chess in a place by itself. *Every grain* came up, and it stood the winter well; having plenty of room, it stooled or tillered very much, and I think I would have had a pint of produce, but when it got nearly ripe the chickens ate it all up, and prevented me from measuring it. I have never found wheat *all* to come up, and what does come up never all stands the winter."

Seeding to Clover—Plaster.—No better investment can be made by the farmer than in seeding all his winter grain fields liberally with clover seed, to be followed by a top-dressing of plaster, as soon as the young clover plants are fairly above ground. The same is true of land in spring grains, and at the present low price of seed, it should be used more extensively than usual. It is the true renovater of our soils, either plowed under green or fed out on the farm, and the latter seems the most economical and profitable. Do not forget that top-dressing clover with manure in midsummer, will largely increase its growth, and its effect upon the fertility of the soil.

☞ In the COUNTRY GENTLEMAN of March 27th, we asked the assistance of our correspondents in estimating the effect likely to be produced upon the Crops of the present year—especially in the West,—by the withdrawal of more than half a million of men from the field of labor to take part in the suppression of the great Southern insurrection. We are pleased to learn that the very important Agricultural State of Ohio promises to show *no falling off*: JNO. H. KLIPPART, Esq., Secretary of the Board of Agriculture, writes us under date of Columbus, O., March 29th—

"So far as Ohio is concerned, I learn by replies to my circulars issued to every county in the State, that there was last year, and will be this year, no diminution in the breadth of ground cultivated. And what to me is somewhat surprising, is the fact that farm labor is as abundant as usual, of a better quality, and at no higher rates than in former years. Ohio has 90,000 men in the field, and in camp, and yet so far as her industrial resources are concerned they are apparently not missed. Is it possible that in Ohio we have attained the maximum of production, and that the 90,000 now in service were a surplus population, with whose services we could dispense without disturbing our industrial economy? In what direction shall we seek for a solution of this anomaly? Will the extraordinary amount of machinery introduced explain it?"

To Mr. KLIPPART'S queries we shall not at present attempt an answer; they may suggest responses from other sources, and they certainly afford room for careful thought. It would be matter of interest to receive information from other Western States, upon the subjects mooted.

As to ILLINOIS, a letter from Livingston county, since received, states that there, "no diminution can be seen in respect to the amount of land that will be worked this season. Those remaining seem to feel called upon for greater exertions to make up the loss of their brethren now on the field of battle. Great quantities of sorghum will be raised this season. Parties from the east are looking it up with their usual shrewd calculation and energy, and the amount planted this year will be immense."

DESTROYING WEEDS.—B. J. CULVERT of Fresh Pond, Long Island, informs us he has purchased a farm which he finds much infested with wild radish, (which we suppose to be the Raphanus raphanistrum,) and which he is destroying in the following manner: He sows oats early, with 150 lbs. of guano, and three bushels of seed, per acre; this is cut for fodder the middle of June, and yields about three tons per acre, requiring more curing than hay. Early in autumn the land is plowed and sowed a second time, and some five tons of fodder are thus obtained from an acre. The frost kills the few plants of the weed that are left. The second season, the process is repeated, by which time he thinks the weeds will be eradicated. We would like to hear the final result of the experiment. In answer to the inquiry of our correspondent, we think barn-yard and stable manure the best for enriching the soil, but a portion of ashes, marl or lime, will doubtless be a valuable auxiliary.

SORGHUM CULTURE IN OHIO. — There was considerable sorghum cultivated here last year, and there will probably be a much more extended culture of it the coming season. Last year the cane did not yield per acre so much syrup by one-third as the year previous—the season was too cold. I manufactured one thousand gallons of superior syrup, and had the cane been as rich as the cane of the previous year, it would have yielded fifteen hundred gallons. I sold all readily at 60 cents per gallon. There was probably made in this county between thirty and fifty thousand gallons. I intend to make three or four thousand gallons the coming season. The cultivation of sorghum will undoubtedly become a new resource to western farmers. P. A. SMITH. *Troy, O.*

☞ We lately noticed the statistics of the Grain Crops of England in 1861, collected to show the deficiency in the yield obtained last year, and the quantity probably to be required before another harvest. A supplementary return has since been published, with reference to the breadth of land put under winter wheat last autumn, and the present prospect as to the yield of 1862. From the tables therein included it appears that the acreage of winter wheat is unusually great; and not only has a *very large* breadth been sown, but the seed has been put in under the most favorable circumstances. "If, to some extent, rather too late, (as a rule,)" says the Mark Lane Express, "yet the mildness of the winter has favored it, and the plant generally is strong, healthy, and without breaks in the rows. It would be needless to give any condensed table of this schedule, as, with the exception of about four or five cases, the whole of the returns agree in their accounts, both as to the largeness of the breadth and the wonderfully fine appearance of the plant. If no disaster intervene between now and harvest, there is the prospect of this important product yielding the largest amount of produce that ever was known."

England has been forced, during the past two years, to pay such immense sums to foreign nations for Breadstuffs, that it is no wonder if her farmers are now determined to exert themselves to their utmost capacity to enlarge the production of the country. The same paper from which the above quotation is made, contains the official tables of imports and their computed value for the years 1860 and 1861. We derive from them the fact, worthy of being placed on record here, that the value of the Grain and Flour, including under the former, wheat, barley, oats, peas, beans and Indian corn, at $4.84 to the pound sterling, was:

Imported into Great Britain in	1860.	.....	$152,134,766
do.	do.	1861, ...	168,193,349
Aggregate for two years,		.....	$320,328,115

What immense profits must the manufacturers and merchants of those little islands derive from their commercial intercourse with the rest of the world, when they are able to pay out such a sum as this in two years for the mere bread which the people consume.

☞ Mr. JURIAN WINNE, of Bethlehem near Albany, whose operations in the Winter Feeding of Sheep we have noticed in former years, has been fattening about four hundred Leicesters and Leicester grades during the past four or five months. They were lately sold in three lots,—one lot averaging a weight of 146 lbs. per head, the second lot 169 lbs., and the third lot 238 lbs. each.

THE IOWA STATE FAIR, 1862, will be held at the city of Dubuque, on the last day of Sept., and three first days of Oct. Dubuque is the largest city in Iowa—is on the Mississippi river, 180 miles west of Chicago, at western terminus western division of Ill. Cent. R. R. and eastern terminus of Dubuque and S. C. R. R. This location can furnish a local population of some 26,000, within 12 miles. The Fair grounds will be only five minutes walk from the Post Office.

THE ILLINOIS STATE FAIR FOR 1862, will be held at Peoria, commencing on Monday, Sept. 29, and continuing six days. A trial of reapers and mowers will be held during the summer at Dixon, Ill. The time and programme in full will be published soon.

FARM ACCOUNTS.—In keeping farm accounts, I find Hough's "FARM RECORD," prepared for a series of 25 years, to answer every purpose, in connection with a daily diary—cost of this work, $3. Every intelligent husbandman should keep his Dr. and Cr. accounts with stock, fields, and grains, balancing each year's operations. A few minutes each day, or once each week, (if transferred from daily memoranda,) will enable him to do this satisfactorily, and correctly enough for all practical purposes.

"W."

Inquiries and Answers.

TIME TO CUT TIMBER.—When is the best season to cut building timber other than evergreens—say oak, maple, beech, basswood, &c., to be cured in the old fashioned way after it is in the frame? Our people differ very much upon the subject; some say when the leaf is off; others when it is on—some say when the bark will run; others prefer the winter in February. Another class, that when the sap is out of the wood, which they claim to be in summer, while others maintain that that time is in February. I have had but little experience, but that little leads to the time when the bark will peal, which is generally in the early summer. What say you? It is of some importance to me just now, and I should like to know. G. CLARKE. *East Springfield, March*, 1862. P. S.—I notice in many of our old frames, much of the oak has powder-posted. That ought not to be. I am a great lover of oak on account of its strength, but don't want a powder-posted building. I don't mean white oak; that has all left long ago. [Summer is the best time to cut timber, chiefly because it seasons rapidly at that time. It should, of course, be left in the logs as short a time as practicable. Timber cut in winter is long drying, and incipient decay commences before the process is completed. There is rather more sap in a tree in winter and early spring than in summer, when the leaves have carried off a part. The wood is also rather less watery after midsummer than before, and dries better, and makes harder seasoned stuff. It is therefore not quite so well to cut it till rather after midsummer.]

OSAGE HEDGE.—I have determined to set out an Osage Orange Hedge. Shall I plant it *this* spring, or cultivate the ground this year, and plant the hedge next year? In *your* judgment what is the best distance to set the plants apart? H. S. JR. *Dayton, O.* [If the ground can be made in good order this spring, it will save a year's growth to plant now. A good covered drain should be within a few feet of the hedge. Six or eight inches have been usually recommended, but we think a foot a better distance for the plants, as, by having more room for the roots, the trees will have double the strength above ground.]

PEACH WORM.—Will you give us some advice how to keep the worms from destroying our peach trees? They entirely bark them at the ground. MRS. R. W. *Indianapolis, Ind.* [We can only repeat the mode we have so often prescribed before—to cut the worms out with a knife. This is a sure remedy--after a worm is killed he cannot possibly do any farther injury. Any man, stupid or otherwise, may do the work—always observing this single rule, that wherever he sees the saw-dust-like exudation near or at the surface of the earth, there he will find a hole or cavity eaten into the bark, which he is to follow with the point of his knife till he finds the grub. An active person will thus examine and rescue hundreds of trees daily, and if done timely and two or three times a year, nothing need be feared. It is by far the easiest and most effectual remedy.]

COUGH IN HORSES.—Will you or some of your subscribers please inform me through the columns of your paper, what will stop a horse coughing? He has not got the heaves yet—had the horse distemper three years ago, and it left him with a hacking cough. I have tried patent medicines to my satisfaction He is six years old and sound otherwise. P. *New Lisbon.* [A specific prescription can be pointed out only by knowing the particular cause of the cough—but as a general rule, which can never injure and may do much good, give moist or succulent food, such as grass or clover during the summer season, and carrots or other roots, wet or scalded chopped food, good cornstalks, &c. in winter. Slippery elm or flax-seed tea would be useful in recent cases, but would probably not produce much effect on a cough of very long standing. Work moderately, never sweat the animal much nor overdo, and blanket well in cold weather or after working. If any thing will mitigate or cure the disease, it will be this succulent food and careful nursing. The latter is indeed worth all the "patent medicines" that ever a poor sick animal was cursed with.]

BEANS ON RICH LAND.—I have a piece of ground, allowed to run fallow the coming season, previous to being put into wheat, and have concluded to put it into field beans. My neighbors say that the soil is too rich for beans, and that they have had but poor success upon the same quality of soil, their beans all running to vines. I have read the several articles in your paper, and from them must conclude that this theory is a false one. The soil is a sandy loam, good quality, on which was harvested a corn crop last fall. Is there any particular bean that is better adapted for this kind of soil than another. P. *Montour Co., Pa.* [We have not found any common soil, well manured, too rich for beans, but cannot pronounce with confidence in relation to that above mentioned. If the "neighbors" have given it a full trial, their experiments are more conclusive than any opinion merely--but they may have been imperfectly or badly performed. Small varieties of the bean, having small stems but bearing well, would do best for rich land as a general rule, but we could not mention any that have been cultivated especially for this purpose.]

APPLE SEEDLINGS.—Can seedlings for a nursery be raised from sowing apple (or other fruit) seed in a dry state, in the spring of the year? If not, how should the seed be prepared to sow when the weather is suitable in the spring? I wish to sow some apple seed (now dry) this spring. S. [Much will depend on the *degree* of dryness, according to the nature of the place where they have been kept. Some might grow if merely planted, although they would be a long time starting. Others would need scalding, that is soaking for a minute or so in hot, not boiling water—in which case only a pint should be treated at a time, as a larger quantity will be too long cooling, and the heat will kill them. In some cases the process will require repeating. When the seeds have become very dry, the scalding must be alternated with exposure to freezing. Our correspondent better try small portions of his seed in these different ways in a hot bed, or box of moist earth in a warm room, and observe the result. The trouble will be comparatively small, if the seed are of much value.]

PROPAGATING THE MAPLE.—I wish to know whether the Rock or Sugar Maple, can be successfully propagated by any method except by planting the seeds. I have long been in the practice of grafting and budding apple, pear, and other fruit trees, in the usual methods, with fair success, but have never succeeded with the maple. I have repeatedly made the experiment, but have invariably failed. Now if you or any of your correspondents know of any method by which the maple can be disseminated by grafts or buds, as we multiply the apple, pear, and the other fruit trees, I wish you would give the information in THE CULTIVATOR. If there is any mode by which this can be readily and conveniently accomplished, perhaps I may send a few thoughts on the subject for publication at some future time, showing that possibly it may become in more way than one a matter of national importance. ELISHA S. FISH. [The maple is so easily raised from seeds, that there seems to be no object in propagating it in any other way. Fruit trees are grafted or budded for the purpose of extending the varieties, but no such care is required in raising maples. There is no doubt that with sufficient care and skill, the maple might be both budded and grafted, but there appears to be no object in adopting a difficult mode, while a simple and easy one is at hand.]

THE PEACH BORER.—I cut the following new remedy for the peach borer from the Terre Haute Journal: "Mr. H. H. Teel of this city, informs us that the gas tar applied to the foot of peach and other fruit trees, where the worms are in the habit of working, is an effectual remedy against the depredations of these destructive vermin. Mr. Teel informs us that he has used this remedy successfully for two or three years. Gas tar can be obtained at a mere nominal price." Is it of any value? S. G. *Eugenie, Ind.* [Gas tar may be useful in *excluding* the grub from the peach if it does not injure the trees. There is a difference in its quality, and while some might be harmless, others would corrode and destroy the bark. While the remedy of cutting out the peach grub with the knife is so easy and effectual, it should be adopted in preference to any external application, which cannot kill the insects that have already gained possession. Soft soap is the best application for preventing the entrance of the apple borer, but a flexible wire or stick is the only way to kill those which have cut far into the wood.]

ASHES.—At what season should ashes be applied to clover to produce the best effect? B. A. [A good time to apply is early in spring, so that the spring rains may dissolve the soluble parts of the ashes and carry them into the soil.]

☞ Is there a pear called the Roxbury Pear? I have been informed that they have such a variety in the vicinity of Boston, Mass., and that it is an excellent variety; and also if there is an apple called the Holtin Sweeting? E. N. LEE. *Wash. Co., N. Y.* [We know of no varieties by the above names.]

☞ Can you tell me where I can obtain *pure* sorghum and tobacco seed? J. S. *Erie Co., N. Y.* [Of J. M. Thorburn & Co., 15 John-st., New-York, we presume.]

HARVESTING CLOVER FOR SEED.—Please inform through THE CULTIVATOR, if there is a machine in successful operation for harvesting clover, taking the heads only, and leaving the straw on the ground? I noticed in THE CULTIVATOR for 1854, a description of one, but have heard nothing of it since. If any of your correspondents will inform me through its pages, of any kind of apparatus for harvesting clover seed, they will confer a favor. W. H. N. *Dela. Co., N. Y.* [A clover comb, made something like a common road-scraper in form, but larger, running on wheels, and having teeth in front for combing off the heads, was formerly used, but it seems not to have obtained general favor. Since the introduction of mowing machines, cutting the whole crop is generally adopted. If, however, any of our correspondents know of the successful and profitable use of any other machine, we should be glad to hear from them.]

ORCHARD PROTECTION.—There is an orchard in this place, having hardy apple grafts set eight feet apart, slightly trimmed, for a hedge on the north and west sides. I would like to inquire whether this would not prove more profitable than the black English willow mentioned by Mr. Gardner in the March number? I think it may be presumed, that at the age of 11 years these trees will bear from a half to three bushels each yearly till 15 years old, when if found then too thick, every other one may be taken for wood; and the remainder, then standing 16 feet apart, will produce a proportional quantity with the trees set 32 feet apart. HARLEY RUDD. *Corfu, N. Y.* [Apple trees, planted as described, will afford some shelter, but the advantages of the willows are their more rapid growth, and the more complete protection of their tall and dense branches. Some orchardists in the Western States, where trees are cheap, plant whole orchards at one-half the usual distance, with a view of ultimately taking out a part of the trees, and the result has been a decided improvement in productiveness from the shelter to the young trees. But there is here again a drawback, in the exhaustion of the soil by the great number of trees which stand upon it, and the thinned orchard cannot afterwards be quite so good as one set at the usual distance at first.]

WARTS ON CATTLE—CROOKED HORNS.—Some of my cows are troubled with warts on their udders and teats, which cause them to be very uneasy during the time of milking. Can you give me a cure for them? Also inform me of the best method to pursue, to cause the horns of cattle to grow in a good position for convenience and appearance, as they are frequently inclined to lop down, and thus in a great measure do away with the attractive appearance of the cattle. A SUBSCRIBER. [To remove the warts, tie a silk thread tightly around the base of each wart, so as nearly to cut into them, and stop circulation—they will come off in two days. This we know to be efficient; but it may be difficult or impracticable where they are numerous, or broad and flat—in which case they may be removed by cutting off, and touching the cut with a hot iron to stop blood, or by applying very strong pyroligneous acid to the wound. Lunar caustic, in a strong solution, is also recommended—also, cutting open the wart, and inserting powdered blue vitriol. We do not know the best way to give direction to the growth of horns, but have been told that a constant pressure applied to the tips while they are growing on the young animal, by a cord tied to them while in the stanchion, and running over a pulley with a weight, or by means of a yoke suited to the particular form, would effect the object.]

CORN FOR SOILING.—As a young farmer and one desirous of learning, I have determined to try the growing of corn fodder for green feeding, but find that among the older heads here it is somewhat discouraged. My pasture will be scant until after harvest—the same older heads say, that up to that time the green stalk is hurtful to cattle, acting as a physic upon them and scouring. After harvest I have an abundance of pasture and the corn must be left for winter fodder. Now what are the facts in the case? Does the young green corn in its early growth, have the effect or not? If so, it certainly is not beneficial or profitable. Information on the subject from any one, will be gladly received by P. *Montour Co., Pa.* [It is not profitable to feed corn as fodder until the tassels are well out—before that time the quantity is comparatively small. The "old heads" mentioned probably judge of its effects by their hungry cattle breaking into their fields at night and overgorging themselves on the succulent plants. Feed after the stalks are grown, beginning gradually, or feeding in small quantities at first, and carefully increasing the amount afterwards, and no harm can result. Corn is not suitable for soiling before harvest, as it is not sufficiently grown so early, but is excellent and profitable during the drouth that usually occurs during the latter part of summer. Clover would be better for early cutting.]

CHERRY INSECT.—I enclose a cherry shoot, attacked by an insect. Can you enlighten us on the subject, as to the depredator and cure? E. W. *West Bloomfield, N. J.* [The one year's shoot has a row of punctures about 25 to an inch, along one side, into the pith for the purpose of depositing eggs. We have often observed this appearance on both cherry and plum, but never discovered any serious injury to result. Larger punctures of a similar kind have been seen in the shoots of the filbert, nearly destroying the bushes. We do not know these insects nor a remedy.]

SOAKING SEED CORN.—I have been recommended to soak my seed corn in chloride of lime. What will be the effect if I do so, and how is this article prepared. J. O. H. *Brook's Station, Ky.* [We do not see any advantage to be gained by the process—and possibly, unless the solution is weak, injury might result to the seed. The chloride is for sale at all drug stores, and dissolves readily.]

THE HUBBARD MOWER.—Your correspondent H. S. Babcock says—"I would like especially to learn the comparative merits of the Hubbard and E Ball machine, manufactured at Auburn." In answer to the inquiry, I will say that I have used and been familiar with reapers and mowers for many years. For the last three years I have used Hubbard's Combined Harvester, which, for ease of draft, adaptation to the unevenness of the surface, durability, and simplicity of construction, all combined, make it in my judgment, one of the best machines now in use. WILLIAM JOHNSON.
Near Geneva, N. Y.

HOW MUCH IS MILK WORTH TO MAKE INTO CHEESE.—I wish to make an inquiry of some of your correspondents who have experience in cheese making. An early answer through the COUNTRY GENTLEMAN will greatly oblige me. I want a rule for fixing the price of milk, to be bought and made into cheese, so that the price of the milk shall be proportioned to the value of the cheese. I want one that will be certain to give the cheese maker a fair profit and leave the rest to the sellers of milk. Also, the best method of making *double curd* cheese; or of manufacturing the milk of two days into one cheese. E. G. CHILCOTT.

PLANTING PITS AND NUTS.—I have had a little bought wit that I did not think came too dear; got by my own experiments. All pits, such as peach and plum, will crack themselves if properly frosted; and if they dont crack themselves, they will not grow if they are forced open with the hammer. So with walnuts; they should be put in the ground as soon as they fall from the trees, and not be suffered to be too deeply covered with snow through the winter.
Newark, N. J. J. BALDWIN.

DEFECTIVE HORSE.—I avail myself of the privilege so freely accorded to the readers of your journal, of applying for information. I have a promising young mare, four years old this spring, of fine stock, and with the exception of a defect in her gait showing every indication of speed. Last season she acquired the habit of pounding her knees when when driven fast, causing soreness and swelling. This has been a great drawback in my efforts to develop her powers, and if not remedied will effectually dispose of my hopes of her future. Can any of your readers suggest anything? Is there a remedy? Will her progeny be likely to inherit this imperfection? Any suggestions will be thankfully received and promptly acted upon. D. B. *New-York.*

PEACH WORM.—I would add to your recipe to Mrs. R. W. of Indianapolis, (p. 224,) giving the method and how to destroy the peach worm. Scoop out a hollow about the tree, and give a pail of boiling suds, or one quart of wood ashes to a pail of boiling water, spring and fall. The suds I consider preferable. I have seen fine pieces of unslaked lime placed near the tree about the first of May level with the soil. I don't find the manure heap any detriment to my trees, making the peaches earlier and good enough. I prefer this to trusting to any hired man's effectual cleaning with the knife.
JERSEY.

BEES.—I wish to inquire of the "Bee Man," why hundreds of colonies of bees have died with plenty of honey—plenty of ventilation? After a colony has perished, upon opening the hives we invariably find plenty of honey all candied or sugared and water over the comb. Is it because the honey is candied—and if so, what makes it candy—what property is wanting? JUNIUS. *Minnesota.*

TOBACCO.—What kind of soil is best for tobacco, and at what time should the seed be sown? J. SOUTHWICK. [Tobacco requires a warm, rich, mellow soil. The seed should be sown in seed beds as soon as the danger from frost is over.]

[For the Country Gentleman and Cultivator.]

The Permanence of Wooden Fences.

EDITORS OF CO. GENTLEMAN—It seems to me that your correspondent H. of the 20th inst. has taken rather extreme views in relation to fencing. It is true, as he says, that there has been little improvement in this matter for near a century, although there have been various modifications in the construction of wooden fences, but generally eventuating in expensive failures, and soon cast aside. After all simplicity must be the rule among farmers in these matters as well as in others. Anything involving much mechanical labor, is in general to be avoided. All mortices and tenons made in building wooden fences, while it consumes time, tends to rapid decay unless kept thoroughly painted, which is expensive and laborious. So also of materials requiring to be nailed, the rust of iron being very destructive to wood when exposed to weather. These considerations have doubtless induced the continuance of the old post and rail and zig zag fence, which last is by far the most generally used on farms here. Nor do we find it so expensive as your correspondent H. seems to think. According to his view a rail or board fence lasts only about ten years. That is quite a mistake and can scarcely be said of fences built of the poorest materials. I will give a few instances which have fallen under my immediate observation. More than fifty years ago my father had a new partition rail fence made across a field, about forty rods in length of chestnut rails in the zig zag form set on stones, drawn from the field, about eighteen inches high. This same fence is now standing, the foundation and lower tiers of rails having never been changed. In making this kind of fence, we usually select the largest and best split rails for the lower portions of the fence, and as we come towards the top lighter and poorer materials are used, generally ending by a round pole, termed a rider, on the top of the stakes. Such materials of course do not last as long. The top therefore of the fence named has had a few rails replaced in repairing. Now I have no reason to believe that the most of this fence will not last until the close of the present century. I am quite sure that much of it would be sound and good at the expiration of that time, could the growth of bushes and running vines be kept down; more especially ground ivy, which is poisonous to many if handled, and which sometimes almost covers the fence. These pests get among the cobble stones carted from the fields, in preparation for mowing, and thrown under the fence and are very difficult to extirpate; so much so that they are allowed to run rampant. As to the great waste of land occupied in making this kind of fence I would remark that it is not all waste. Grass grows freely along these fences, wherever there is a spot unoccupied, especially adjoining the plowed lands under good culture. Again in dry seasons sometimes immediately after mowing, the stubble and every pasture lot is dry and withered. All along these fences is a mat of green herbage which sheep and cattle will greedily eat, not excepting the poisonous ivy and even the leaves of that cattle upas, the common wild cherry, which throws up numerous succulent sprouts wherever it is cut down. Again in this part of the country we find that apple trees with a little attention, after being planted at convenient distances in the joints of this fence, grow well and bear freely, the form of this fence affording a convenient chance to plant the trees along the joints without being in the way of working the land. Where fruit trees are not planted, a growth of red cedar generally springs up, becoming in a few years valuable for various purposes of building and affording a fine protection to fields of winter wheat. Last of all when these unsightly fences are repaired, the decayed rails are still worth something. They make very good summer fires, especially for baking, as our good house-keepers can testify. So much for zig zag fence; now for posts and rails.

About the year 1816 a post and rail fence was erected on the farm; since that period coming into possession and wishing to erect a substantial stone wall in its stead, I had it moved and put up as a division fence on another portion of the farm, where it stands and promises to remain in good condition for many years to come, nearly all the original rails still remaining, a few only having been broken or decayed. This kind of fence is not quite as durable as the zig zag however. The posts were of Long Island locust—none of them having been replaced.

One more instance. In the year 1800 the house which I occupy was built, and the following year the fences around the dwelling were erected of squared locust posts 3 by 2¾ inches, yellow or pitch pine railing, white or soft pine foot boards and pickets. Last summer (1861) about half of it was taken down and a new fence built, with the exception of the pickets, which were found in so good a state that they again were nearly all worked in the fence. There had been a little repair in some portions of the old fence during the period—some three or four posts and a rail or two had given out. The other half is still standing. This fence was kept painted during the time for the most part, although some intervals of exposure intervened.

I have always supposed it practicable to fence our farms by hedging, yet all the attempts I have witnessed have failed, not however from inadaptedness of the material so much as from the want of systematic management. The Osage Orange in a country not supplied with timber, would be a good substitute for dead fences in my opinion. Hawthorn does not grow well here, the summers being too hot and dry. Honey locust might be used to good advantage. The finest hedging plant I think is American Arbor vitæ. Beautiful at all seasons, it can be managed as a hedge with great ease, and forms a wall of green; yet I have never seen a farm hedge of this material. All these substitutes for dead fences however, are attended with great expense and much watchful care in the rearing and protection required for many years before they become really fences. In the meantime the farmer has the two-fold task of protecting them by fences on one or both sides to prevent his cattle from destroying what has required years of anxious toil and care to produce. Then too it is difficult to repair serious injuries in a hedge after attaining much size, requiring years of additional care; natural growth gets the start and generally will succeed well. Its value for fencing may be estimated when it is known to resist decay in the ground for near a century, and sells in New York market for posts at the rate of forty to fifty dollars per measured cord. Red cedar of sufficient age is nearly as lasting. Mulberry is quite so, and the Catalpa is also said to be about as durable as locust. The two latter varieties are attainable at low prices, almost at any time in this vicinity. Both are easily transplanted and deserve attention.

Cold Spring Harbor, L. I. R. M. CONKLIN.

SKUNK TRAP.—A correspondent of the Ohio Farmer describes the following very simple but ingenious way of trapping "vermin:"—Every man may catch his own skunks. I have just discovered a new and novel trap for catching these pesky animals. I take an old flour barrel, tack my bait in the bottom, and lay it on two blocks about six or seven inches high, one of which is near the centre; the skunk goes in, steps over the fulcrum, and the barrel rights up on its end with the skunk in it. He can readily be disposed of by throwing him into the water, aud then shooting him. I have taken five within a few nights. This is safe against cats and other domestic animals. Try it.

☞ The editor of the Maine Farmer suggests the use of Hop vines for bands in binding grain, cornstalks, straw, &c. "They are strong, flexible and tough, and have the advantage of being longer than Osiers, if you wish them longer. Indeed they may be cut of any required length, and may be kept and saved after the hop has been gathered, cut into convenient lengths, and laid away until another year for the grain binding."

CHINESE SUGAR CANE—IMPORTED SEED.

The subscriber offers for sale a small quantity of the

GENUINE SORGHUM SEED,

received from Messrs. VILMORIN & Co. of Paris, which may be relied upon as PERFECTLY PURE. Packages containing half a pound mailed to any address on receipt of

TWENTY-FIVE CENTS

in postage stamps. No order will be filled for less than half a pound.

April 24—w3tm1t. B. K. BLISS, Springfield, Mass.

AMERICAN ARBOR VITÆ.—

A large stock of well grown nursery plants, 12 to 18 inches high, $2 per 100, $15 per 1,000, $140 per 10,000; 18 to 24 inches, $3.50 per 100, $25 per 1,000; 24 to 30 inches, $5 per 100; 8 to 12 inches $10 per 1,000. Packing done in the best manner without charge.

S. T. KELSEY & CO., Great Valley Nursery.

April 17—w3tm1t. Great Valley, Cattaraugus Co., N. Y.

AGRICULTURAL SEEDS BY MAIL.—

The following reliable Seeds will be mailed to any address at the prices affixed:

	Per Ounce.	Per Half Pound.
Mangold Wurtzel, Long Red	6 cents.	30 cents.
do. do. Yellow Globe	8 do.	30 do.
Carrot, Long Orange, extra deep color'd,	10 do.	40 do.
do. White Belgian	10 do	40 do.
Ruta Bagas, Skirving's Purple Top,	8 do.	30 do.
do. do. Laing's Improved	8 do.	30 do.
Sugar Beet, true	8 do.	30 do.
Chicoree, the great substitute for coffee,	10 do.	40 do.
Onion, Large Red Wethersfield,	10 do.	40 do.
do. Yellow Danvers,	15 do.	50 do.

Those who wish for larger quantities will be supplied at the lowest market rates.

Our Descriptive Catalogue of Vegetable and Flower Seeds will be mailed to any address on receipt of a three cent stamp.

April 24—w3tm1t. B. K. BLISS, Springfield, Mass.

FOR SALE.—State and County Rights for

"BRYANT'S NEW MODE OF HANGING AND RUNNING FLY WHEELS." Address the Proprietor, J. BRYANT, M. D.,

April 17—w2tm2t.* Brooklyn, N. Y.

NEW SEED POTATOES.—

Having secured the entire crop of that most excellent Potato known as the

GARNET CHILI VARIETY,

grown by HAZEN VAN NOSTRAND of Fulton County, they are now offered in large or small quantities on the most reasonable terms. By the quantity, packed in good barrels, and delivered to railroad or boat, they are furnished at the low price of $4.50 per barrel.

This variety has been successfully cultivated during three or four years past, and alongside the Prince Albert, Pink-Eye, Peach Blow, and other varieties, and has never rotted or failed, while all the other varieties have failed at the rate often of 30 to 50, and in some cases 90 per cent.

It has been pronounced by the New-York State Agricultural Society, the best of 58 varieties, exhibited together at the Fair of 1860. Although not as early as Prince Albert, it is equally as fine in quality, and grows large, is nearly round and uniform in size. It has a very white flesh, and is one of the most hardy as well as best keepers known. This crop yielded over 350 bushels per acre. All orders addressed to EMERY BROTHERS, 62 & 64 State-Street, Albany, N. Y., will be promptly attended to. April 17—w3tm1t.

BERKSHIRE PIGS FOR SALE AT EDWARD WAIT'S,

Walden, Orange Co., N. Y.

Two litters about two months old. One Boar, one yearold.
One pair about seven months old. Will sell to suit the times.

April 24—w&m1t.

NANSEMOND SWEET POTATO PLANTS.

A superior article, as in years past, adapted to northern planting—packed to go safely long distances, at $2 per 1,000; 5,000, $9; 10,000, $15—in May and June. Our plants have given pleasing and highly satisfactory results in the north for many years—growing good crops forty-four degrees north.

Send stamps for my Circular on growing and keeping Sweet Potatoes, with the experience of growers, &c.

C. B. MURRAY,
Foster's Crossings, Warren Co.,

April 24—wtfm1t. Ohio.

DOWNING'S FRUIT AND FRUIT TREES

Just Published and for Sale at this Office—sent by mail, postpaid, at $1.75.

Coe's Superphosphate of Lime.

TO THE EDITORS OF THE BOSTON POST—GENTLEMEN—The testimonials to the many valuable qualities of Coe's Superphosphate of Lime, multiply from all quarters.

Wishing that the public may be reliably informed upon this really valuable fertilizer, we send for insertion in your paper a letter from our well known citizen FRANCIS E. FAXON, Esq. His integrity and practical farming intelligence are well known to all his acquaintances.

BOSTON, April 1, 1862.

MESSRS. COE & CO.:

GENTLEMEN—I am the owner of an "interval" farm in Conway, N. H., and by way of experiment I purchased last year, of Messrs. Breck & Son, two tons of Superphosphate, and I am so well satisfied with the effect produced, that I have purchased of the same house four tons for use the coming season. My experiment was made as follows: On the 10th of May, 1861, I broke up an acre of cold land, which had been used for a calf pasture for many years. After harrowing thoroughly I put in each hill a handful of Phosphate, mixing it slightly with the loam. From the acre I harvested eighty-four bushels of ears, all sound and filled over the ends. One row I planted without the Phosphate, the result was, stalks a foot in height, and not one ear of corn.

For Garden use I consider it the best stimulant I ever saw, the worms and bugs giving it a wide berth.

In the Fall of 1860 I sowed down six acres to grass, manuring with 625 pounds of Phosphate per acre. The result has been highly satisfactory thus far, and I think it will be a lasting and valuable fertilizer. Yours, respectfully, FRANCIS E. FAXON.

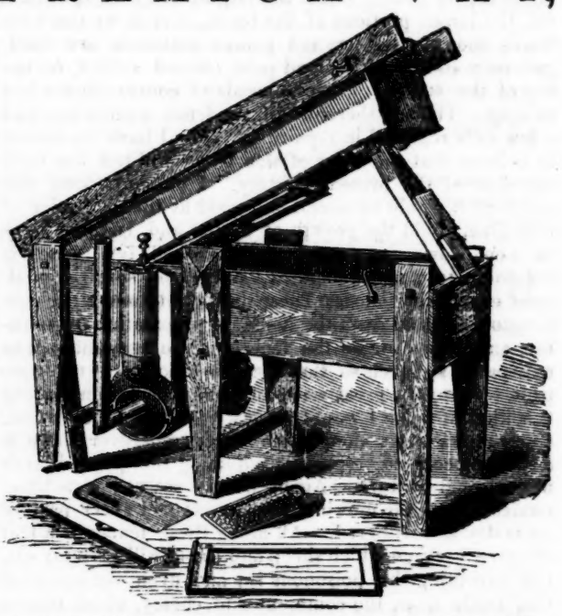
April 17—w&m1t.

COE'S SUPERPHOSPHATE OF LIME.—

Office 19 Broad-Street, Boston.

For Testimonials of the value of this article, address COE & CO. as above. April 4—w1y.

ROE'S WESTERN RESERVE PATENT PREMIUM VAT,



WITH IMPROVED HEATER AND VALVES.

THIS well-known CHEESE VAT was first introduced to the Dairymen more than seven years ago; **several thousand** have since been sold throughout the country—**more than one thousand** the past season; numerous and valuable improvements have been added from time to time, to embrace everything wanted in a CHEESE VAT, and we believe it now is the most **complete, simple, durable and convenient Cheese-Making Apparatus in the world.** Our long experience enables us to warrant our VAT to give entire satisfaction. By getting one of these VATS, a single Dairyman in any part of the country will have as complete an apparatus as is used in the largest dairying localities. The cut shows the back side of the VAT when opened, after using; the tube on the end of the heater is for the escape of steam; the knob at top operates the valve.

ROE'S PATENT ADJUSTABLE EXPANSION CHEESE HOOP, a very nice thing; one hoop makes three sizes, and expands to lift off the cheese.

SEND FOR CIRCULAR.

May 1—m1t. ROE & BLAIR, Madison, Lake Co., O.

50 HONOLULU NECTARINE SQUASH SEEDS, nine cents—Giant Emperor and Truffaut's Peony Flowered Asters, nine cents—Zinia Elegans, nine cents. All the above free, for twenty-four cents. P. SUTTON,
April 10—w1tm1t. Ransom, Luzerne Co., Pa.

A NEW GOOSEBERRY AND NEW RASPBERRY

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I. VARIETIES.—1. GARNET CHILI, red. 2. PINK EYE RUSSY COAT, white. 3. CUZCO, white. These three are all round, and ripen with the season. The first two yield very largely, and possess a higher degree of hardiness and adaptation to all soils and weather, than any other sorts known to me. The Cuzco is a little less hardy, but is the largest yielder within my knowledge. 4. COPPER MINE, slightly copper colored, longish, in hardiness like the CUZCO, and two weeks earlier than the three preceding.

These four sorts have all white flesh, GROW CLOSELY in the hill, do not PUSH OUT of the soil, and are very smooth and beautiful, except that the Cuzco is a little deep eyed. In most localities they have all acquired a good character for table quality. They have been selected in a thirteen years experiment, from more than ten thousand new seedlings. In good soils and seasons, and with fair culture, they will readily yield from 250 to 350 bushels to the acre, while in the hands of many of my correspondents, they have far exceeded those figures.

☞ I have no very early sorts that are well tested, but hope to have such by 1864.

II. AGE AND DIFFUSION.—The Garnet Chili is a seedling of 1853, and has been before the public for six years. It is now more extensively cultivated than any other new variety, and is beginning to be sold under new names. The other three sorts are seedlings originated in 1856, and have been in market but two years. They are all already known in nearly every State north of Virginia and Kentucky, and in Canada.

III. PRICE.—$3 (three dollars) per barrel of 140 lbs., $1.50 per bush., $1 per half bushel, and 50 cents per peck. CASH IN ADVANCE. The larger price is charged for the smaller quantities from the proportionably greater cost of packing and delivery.

IV. TRANSMISSION.—They will be forwarded by railroad, canal or express, as shall be directed. The sorts shall be kept distinct, and the packages carefully directed. The sorts will be described in a printed sale bill, with directions for potato culture, which will be forwarded by mail when the potatoes are sent.

☞ Sums of less than $1 may be sent in 3 cent postage stamps.

☞ The first of April is as early as potatoes can usually be sent safe from frost, except they go directly south.

CHAUNCEY E. GOODRICH, Utica, N. Y.

REFERENCES.—From among very numerous persons who have cultivated these and others of my seedlings for the last two years, I select the following:—George Buckland, Toronto, Canada West: Geo. Bachelder, Stanstead, Canada East. H. M. Cram, Vergennes, and Albert Breese, Hubbardston, Vt. Charles H. Gleason, Holden, Wm. Bullard, Dedham, and Wm. F. Bassett, Ashfield, Mass. Horace Humphrey, Winchester Corners, Ct. Jesse Vaughn, Cheektowaga, Samuel J. Wells, Fayetteville, E. W. Howell, North Chili, O. C. Chapin, East Bloomfield, John Bowman, Baldwinsville, and Edward Merritt, Poughkeepsie, N. Y. W. W. Griscom, Woodbury, and Benj. Sheppard, Greenwich, N. J. P. B. Gray, Half Moon, P. Sutton, Pittston, and Aaron Bombaugh, Harrisburgh, Pa. Yardley Taylor, Loudon Co., Va., J. Howard McHenry, Baltimore, Md. J. C. Holmes, Lansing, and S. T. Douglas, Detroit, Mich. S. L. Manker, Pontiac, and John Moss, Robin's Nest, Ill. Feb. 13w&m.

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